

The Honorable Sean P. O'Donnell

SUPERIOR COURT OF WASHINGTON FOR KING COUNTY

ZUNUM AERO, INC.,

Plaintiff,

v.

THE BOEING COMPANY; BOEING
HORIZONX VENTURES, LLC; SAFRAN,
S.A.; SAFRAN CORPORATE VENTURES,
S.A.S.; SAFRAN ELECTRICAL & POWER,
S.A.S.; SAFRAN HELICOPTER ENGINES,
SASU,

Defendants.

NO. 20-2-17056-9

FIRST AMENDED COMPLAINT

Plaintiff Zunum Aero, Inc. ("Zunum"), by and through its attorneys of record, Williams Kastner & Gibbs, PLLC, and Shlansky Law Group, LLP (*pro hac vice* admission forthcoming), hereby states and alleges as follows:

I. INTRODUCTION

1. Aircraft giant The Boeing Company ("Boeing"), along with its affiliates, major suppliers, and their affiliates, employed a targeted and coordinated campaign to gain access to proprietary information, intellectual property, and trade secrets reflecting Zunum's plans as the first-mover in the market for hybrid-electric and electric aircraft, initially tailored to short-haul flights under 1,500 miles, and with the potential to establish a new paradigm for door-to-door

FIRST AMENDED COMPLAINT - 1

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1 travel by integrating modes of transportation. Zunum's innovation reconceptualized air travel in
2 a way that would enable hybrid-electric or electric aircraft technologically to be economically
3 viable decades sooner than the aerospace industry otherwise thought possible. This fundamental
4 advancement in aviation technology has the same potential to disrupt the air travel as Tesla has
5 recently achieved in the automotive market.

6 2. The paradigm shift that Zunum has innovated will provide cheaper, faster,
7 cleaner, and quieter alternatives to 80% of current domestic commercial flights, opening
8 extensive unserved and underserved markets for short-haul air travel. Zunum's innovations
9 include novel aircraft designs, hybrid-electric or all-electric propulsion systems, integrated
10 electronic systems, and systems that will create new opportunities for integrated door-to-door
11 travel options for consumers. Zunum's innovative and unique design for hybrid-electric and
12 electric propulsion aircraft outperforms conventional air travel on cost, travel time, noise,
13 emissions, and other key metrics.

14 3. Boeing took advantage of preferred access through a position of trust as an
15 Observer on Zunum's Board of Directors, which entailed fiduciary duties to Zunum, as well as
16 through extensive due diligence under the pretext of a strategic investment in Zunum, to gain
17 access to the business plan, market and technological analysis, and other trade secrets and
18 proprietary information that Zunum had developed over many years and that were otherwise
19 unknown to Boeing. Boeing exploited this access for its own benefit and to Zunum's detriment.

20 4. Prior to obtaining access to Zunum's proprietary and confidential information,
21 Boeing believed that hybrid-electric propulsion aircraft was a distantly futuristic technology that
22 was decades away from realization. A senior Boeing executive also told Zunum's Chief
23 Executive Officer that Boeing's interest in electric aircraft pertained to small drones or parallel-
24 configured hybrid single-aisle aircraft decades in the future.

1 5. But, upon gaining access to Zunum's proprietary and confidential information,
2 Boeing realized its value and recognized the potential for Zunum to revolutionize air travel,
3 initially in the short-haul market for flights under 1,500 miles, which would pose a direct threat
4 to Boeing's mainstay single-aisle aircraft market, and which presented an opportunity that
5 Boeing could eventually leverage to extend its dominant position in its other aircraft markets.

6 6. Boeing also gained this insight through extensive due diligence on the market
7 viability of Zunum's proprietary technology, which it undertook in connection with an initial
8 investment in Zunum. The same engineers and other personnel that Boeing had deployed to
9 conduct investment due diligence on Zunum also, without Zunum's permission, were also
10 assigned to staff competing programs at Boeing that directly benefitted from exposure to the
11 voluminous body of information and trade secrets that Zunum had provided to Boeing.

12 7. In order to gain and then maintain control over the competitive threat posed by
13 Zunum's innovative technology, Boeing strung Zunum along with assurances that Boeing would
14 invest in Zunum. It also offered to lead efforts to secure commitments from additional investors
15 in Zunum, while Boeing actually undermined and sabotaged Zunum's efforts to attract additional
16 investors, and made (ultimately hollow) offers to collaborate with Zunum to build the airframe
17 and provide other expertise to aid in the commercialization of Zunum's novel design and
18 technology.

19 8. Within months of Boeing's initial investment, the main suppliers of Boeing's
20 electrical systems, the Safran, S.A., also known as the Safran Group ("Safran"), a French
21 aerospace conglomerate, and United Technologies Aerospace Systems ("UTAS," which was a
22 part of United Technologies Corporation and is now part of Raytheon Technologies
23 Corporation), approached Zunum with proposed investments to support the development of
24 Zunum's technology. Zunum also held discussions regarding collaborating with one of the
25

1 Safran Group's business units to supply a turboshaft for Zunum's hybrid-to-electric propulsion
2 system.

3 9. However, unbeknownst to Zunum, Boeing was copying the plans, designs and
4 technologies that Zunum had disclosed to Boeing as an investor in Zunum and as an Observer
5 on Zunum's Board of Directors (and subject to non-disclosure and non-use obligations), and was
6 misappropriating Zunum's proprietary information as its own in order to exploit the vast market
7 opportunity that Zunum was in the process of capitalizing on as the first entrant.

8 10. After obtaining this proprietary information from Zunum, Boeing approached
9 Safran and other original equipment manufacturers ("OEMs") of electrical components, such as
10 UTAS, to provide a hybrid-electric propulsion system for a different aircraft design that Boeing
11 was trying to develop based upon this proprietary information misappropriated from Zunum.
12 This aircraft design is now called the BHE-11, which, upon information and belief, refers to the
13 Boeing Hybrid Electric 11.

14 11. Safran also believed that hybrid-electric aircraft were not viable until decades in
15 the future. By approaching Safran to develop the BHE-11 on timeframes identified in Zunum's
16 business plan, Boeing disclosed Zunum trade secrets to Safran that enabled Safran, in less than
17 two years, to accelerate its development of hybrid-electric aircraft by nearly two decades, and
18 colluded with Safran to displace Zunum from the very market that Zunum had innovated and
19 disclosed to Boeing.

20 12. Zunum was unaware that Boeing was using its proprietary information in concert
21 with Safran in this manner. Meanwhile, other Safran business units also misused their ongoing
22 investment due diligence on Zunum's plans and technologies to gain, under false pretenses, the
23 information that they needed in order to: partner effectively with Boeing on the development of
24 the BHE-11; exclude Zunum from Zunum's own technologies and exclusive opportunity; and
25

1 enter the market as a supplier of hybrid or electric aircraft. At approximately the same time,
2 UTAS was attempting to do the same thing, also without Zunum's knowledge.

3 13. Zunum discovered that Boeing was secretly developing a replica prototype of
4 Zunum's market entry aircraft design, staffed by the very same Boeing engineers and other
5 professionals whom Boeing had assigned to conduct extensive due diligence on Zunum, under
6 non-disclosure and non-use obligations.

7 14. Boeing had previously provided false assurances that it merely wanted to
8 determine whether it could supply aerostructures for Zunum, not compete with Zunum, and that
9 Zunum continued to have the support of Boeing's top executives. Boeing's Observer on
10 Zunum's Board of Directors, Logan Jones, told Zunum that the replica was being developed by
11 a team drawn from the Boeing Commercial Airplanes unit ("BCA"), and that Zunum should
12 provide further proprietary information in order to avoid damaging Boeing's supposed support
13 of Zunum.

14 15. Boeing also kept Zunum beholden to it for much-needed capital and market
15 validation, stringing Zunum along with the prospects of an anchor investment and providing
16 leadership for further rounds of financing. Although Zunum also sought investments elsewhere,
17 Boeing actively interfered with, undermined, and effectively sabotaged those business
18 relationships while inducing Zunum to continue its reliance on Boeing by holding out the
19 prospect of a strategic partnership or merger.

20 16. Boeing induced Zunum to accept debt financing, convertible into equity in
21 Zunum, without disclosing that Boeing had decided to compete against Zunum and that Boeing
22 would be using Zunum's trade secrets against it to do so.

23 17. By the time that Zunum discovered that Boeing was in the process of competing
24 against it and had misappropriated Zunum's business plan, aircraft design, and technologies for
25 supporting electrical, propulsion, and related systems, Zunum was starved of capital.

1 18. Through a series of breaches of contract and fiduciary duties, misappropriations
2 of trade secrets, and other tortious and fraudulent conduct, Boeing has sought to leverage its
3 dominant position in the aircraft industry and its powerful influence over downstream suppliers
4 to execute on a concerted and systematic strategy to delay and then foreclose the entry of an
5 innovative competitor into the aircraft industry.

6 19. Boeing has also colluded with other key aerospace manufacturers and funders to
7 refuse to deal with Zunum and attempted to foreclose Zunum's entry into the: (i) hybrid-electric
8 and all-electric propulsion aircraft market; (ii) the market for short-haul flights under 1,500
9 miles; and (iii) the market for integrated door-to-door travel.

10 20. Put simply, in contrast to the widely-accepted industry outlook that hybrid-
11 electric or all-electric aircraft were decades away from commercial viability and Boeing's own
12 lacking technology capabilities, Boeing saw Zunum as an innovative venture, with a dramatically
13 accelerated path to the future enabled by its proprietary technologies and plans, and Boeing
14 presented itself as interested in investing and partnering with Zunum. But instead, Boeing stole
15 Zunum's technology and disclosed it to Boeing's partners to accelerate Boeing's own roadmaps
16 by two decades, while intentionally hobbling Zunum, as the upstart entrant, thus stifling
17 competition in order to maintain Boeing's dominant position in commercial aviation.
18 Meanwhile, Boeing combined with its partners to pursue the very same markets innovated by
19 Zunum by misusing Zunum's trade secrets and preventing Zunum's recovery.

20 21. By these actions, Boeing also aided and abetted the misappropriation of critical
21 technologies in a strategic sector of Washington's and the United States' economies by Safran,
22 a French "national champion" partially owned and supported by the national government of
23 France. Boeing then proceeded with Safran as it claimed leadership of the market usurped from
24 the entrant headquartered in Washington, while disrupting successive efforts by that entrant,
25 Zunum, to recover.

II. JURISDICTION AND VENUE

22. The Court has personal jurisdiction over the Defendants pursuant to RCW 4.28, *et seq.*, and 19.86.160 because the acts alleged concern the transaction of business, commission of tortious acts, and the ownership of property within the State of Washington.

23. Venue is proper in King County pursuant to RCW 4.12, *et seq.*, because Defendants engaged in the conduct set forth in this Complaint in King County and elsewhere in the State of Washington and because one or more of the Defendants reside in King County.

III. PARTIES

24. Zunum, formerly known as Tzunum, Inc., is a Delaware corporation headquartered in Redmond, Washington.

25. The Boeing Company (“Boeing”) is a Delaware corporation that conducts business within the State of Washington.

26. Boeing HorizonX Ventures, LLC (“HorizonX”), is a Delaware limited liability company that also conducts business within the State of Washington.

27. Safran, S.A. (“Safran”), is a French company with a principal place of business in Paris, France. Upon information and belief, Safran also describes itself, with its subsidiaries, as the Safran Group.

28. Safran Corporate Ventures, S.A.S. (“SCV”), is a French company with a principal place of business in Paris, France.

29. Safran Electrical & Power, S.A.S. (“SEP”), is a French company with a principal place of business in Cedex, France.

30. Safran Helicopter Engines, SASU (“SHE”), is a French company with a principal place of business in Cedex, France.

IV. FACTUAL ALLEGATIONS

31. Zunum was founded in 2013 by Ashish Kumar, Ph.D., and Matt Knapp, who conceived of proprietary, innovative technologies to disrupt the air transportation industry by developing a \$3 trillion market over 20 years for hybrid-electric and all-electric aircraft that will dramatically improve mobility and greatly reduce or eliminate aviation emissions while reducing noise pollution on flights up to 1,500 miles.

32. Dr. Kumar and Mr. Knapp formed Zunum to develop the world's first hybrid-electric and all-electric (alternately "hybrid-to-electric," as a converging process) regional aircraft for commercial service and to develop this new market as the first-mover.

33. Zunum's aircraft and business plan offer to increase efficiency in door-to-door mobility, reduce emissions, reduce noise, and drive down the cost of short-haul air travel substantially lower than commercial air travel today. By enabling more efficient, smaller, and quieter aircraft, the market and consumers would experience faster and more customized routing, creating time, fuel, emissions, and convenience efficiencies, which in turn would lower consumer costs and substantially expand the civil aviation market.

34. The first aircraft that Zunum designed was the ZA10, a 9 - 12 passenger plane with a 700-mile range, which Zunum planned to be commercially available by 2022. Zunum's plan was to follow the ZA10 with increasingly capable aircraft, creating a low-risk pathway to a suite of single-aisle aircraft that was far less capital-intensive than conventional aircraft design and manufacture.

35. Zunum planned to scale to the ZA50, a 48-seat aircraft with a 1,000-mile range, by 2027, followed by a 100 or greater seat airliner with a 1,500-mile range, by 2030.

36. The aircraft that Zunum had developed offered breakthrough performance, including operating costs at 30% to 80% below that of its best-in-class rivals, regional travel at two to five times faster than existing alternatives, enabling 40% to 80% lower airfares, and with

1 emissions between 60% to 100% lower than conventional aircraft. In short, Zunum's innovative
2 technologies offered a more convenient, faster, cleaner, and cheaper air transportation alternative
3 for consumers.

4 37. These technological features threatened to upend the single-aisle market for short-
5 haul flights. Approximately 80% of flights of the Boeing 737 platforms are under 1,500 miles
6 (short-haul), which Zunum's aircraft were positioned to displace with advantages in travel time,
7 cost, emissions, and noise.

8 38. To this end, Zunum built a unique, agile cross-functional development capability
9 across aircraft, electric power, and propulsion, scaling to nearly 100 engineers in three centers
10 located in the states of Washington, Illinois, and Indiana. Zunum's technologies include hybrid-
11 to-electric aircraft, megawatt-class hybrid powertrain, and quiet propulsion, along with
12 algorithms to orchestrate seamless multi-modal journeys door-to-door.

13 39. In early 2019, when it was forced to halt its development program due to Boeing-
14 caused capital starvation resulting in financial distress, Zunum had a ground prototype of the
15 megawatt class hybrid-to-electric propulsion system for the ZA10 aircraft in final fabrication and
16 testing on track for flight tests on a converted Rockwell Commander later that year. This
17 included proprietary 500 kW lightweight electric machines, along with power electronics,
18 controls, and thermal management, developed at its Electric Power Center in Illinois.
19 Meanwhile, its proprietary electric fan designs were achieving 95% efficiency, with sub-scale
20 prototypes ready for testing at Purdue University. The configuration of Zunum's 500 kW quiet
21 electric propulsion units, with fully integrated electric motors, had been finalized, which along
22 with the aircraft and systems, was on track for a Preliminary Design Review later that year, a
23 key milestone for delivery in 2023. Zunum had also been granted an FAA Special Project
24 Number for both aircraft and engine certification programs.

1 40. Dr. Kumar and Mr. Knapp undertook significant economic risk and left successful
2 professional careers to embark on the Zunum venture and, over several years, developed an
3 extensive body of proprietary inventions, analysis, business and technological plans, and designs,
4 resulting in a roadmap to redesign air travel to improve service for consumers, while reducing
5 the environmental impact from emissions and noise. The aerospace industry and governmental
6 constituents had largely dismissed the possibilities that Dr. Kumar and Mr. Knapp were bringing
7 to the fore, which meant that there was not much financial or research support for these ideas.

8 41. The world-class aircraft, propulsion, electrical, mechanical, thermal, and control
9 engineers, whom Zunum hired from leading OEMs in aerospace, automotive, and heavy
10 electrical systems, also gave up stable careers and risked their futures to join Zunum's effort at
11 the forefront of global aviation.

12 42. The market that Zunum envisioned was hailed in the industry as "a new dawn"
13 for short-haul air travel and was being recognized for its disruptive and transformational value
14 proposition. In addition, in August 2017, shortly after Zunum emerged from operating in a
15 stealth mode, the Zunum ZA10 aircraft was featured on the cover of *Aerospace America*, a
16 publication of the American Institute of Aeronautics and Astronautics, the world's largest
17 aerospace technical society, with the headline: "Can this plane reshape air travel? Zunum Aero
18 leads in betting on the power of hybrid-electric technology." Further, in a survey by UBS Group
19 AG ("UBS"), an investment bank, published in late 2020, passengers listed "hybrid-electric
20 planes" as the most preferred alternative to conventional aircraft due to environmental concerns,
21 ahead of high-speed rail, automobiles, trains, and buses.

22 43. Fast Company shortlisted Zunum as one of the World's Breakthrough Ideas in
23 2018, and, in 2019, selected it as one of the World's Most Innovative Companies. Also,
24 Bloomberg New Energy Finance selected Zunum as a New Energy Pioneer for 2019, one of a
25

1 few innovative companies from around the world recognized for leadership in clean energy
2 technologies and business transformation.

3 44. Zunum's ZA10 aircraft also won the Gold Award for Product Design at the 2018
4 New York Design Awards.

5 45. In July 2019, the investment bank UBS identified Zunum as one of two leading
6 aircraft programs in its report, "Green Power: Will Climate Change Propel the Sector Towards
7 Hybrid Electric Aviation by 2028?"

8 46. In February 2020, Zunum's hybrid aircraft and propulsion technologies were
9 included in the "Aircraft Technology Roadmap to 2050" by the International Air Transport
10 Association, the leading trade association for global airlines.

11 47. Zunum has launch orders for up to 155 ZA10 aircraft from customers in the
12 United States and Europe, valued at up to \$800 million.

13 **A. Industry Background**

14 48. Boeing enjoys a super duopoly with Airbus that dominates the market for single-
15 aisle aircraft with over 90% share of this market. In the past, single-aisle aircraft accounted for
16 about 50% of commercial aircraft sales, and wide-body aircraft made up the other half. Now the
17 percentage of single-aisle aircraft sales is increasing, reaching 60% to 70% of all commercial
18 aircraft sales.

19 49. In the 1990s, much of civil aviation was focused on long-haul flights served by
20 enormous aircraft, such as the Boeing 747 and the Airbus A380. The Boeing 747 was successful
21 for decades with seating for up to 366 passengers, which was eclipsed by the Airbus A380, with
22 seating for up to 853. Not all airport runways could accommodate widebody aircraft, nor could
23 flights to smaller destinations fully utilize the passenger capacity of widebody aircraft, so this
24 necessitated a "hub and spokes" networks of airports requiring passengers to take connecting
25 flight to smaller destinations not serviced by widebody aircraft.

1 50. Over time, however, the airline market has seen a retreat from superjumbo jets to
2 smaller, more efficient long-haulers, coupled with widespread use of variants on the smaller
3 Boeing 737 platform and Airbus competitors. This gives consumers more direct or non-stop
4 flights, which has provided travelers with the benefits of avoiding layovers while minimizing the
5 risk of lost checked luggage when transferring between planes. Simply put, traveling from
6 Bellingham to Provo may now require over a day, a lot of money, and a lot of driving and waiting
7 (if even possible without a private charter), but a direct flight in a smaller craft, using closer,
8 smaller airports, can result in speedier, cheaper, and a more comfortable air transportation
9 experience.

10 51. Boeing's 737 class of aircraft and Airbus's A320 class of aircraft dominate the
11 vast single-aisle market. These platforms were designed for ranges up to 4,400 miles but are
12 often operated on much shorter legs. For example, currently, approximately 80% of the flights
13 of the Boeing 737 in the United States are under 1,500 miles, approximately one-third of the
14 range for which the Boeing 737 platform was designed, making them ill-suited to such
15 operations.

16 52. Boeing has historically not been active in the market for smaller aircraft tailored
17 for short-haul flights, which was served by other manufacturers, such as Embraer and
18 Bombardier. In recent decades, given increasing interest by the airlines in aircraft with seat
19 capacities of 100 to 150, "Embraer and Bombardier saw an opportunity to extend their product
20 lines in ways that, for the first time, would put them in a position to steal business away from
21 Boeing and Airbus, which had not fundamentally redesigned their single-aisle planes in
22 decades." Steven Pearlstein, "Boeing and Airbus, the new 'super duopoly,'" *Washington Post*,
23 April 25, 2018. They did so by launching the Embraer E-Jet E2 family and the Bombardier C
24 Series into the low end of the single-aisle market, creating a competitive threat to Boeing's and
25 Airbus's super duopoly.

1 53. After a mutually unsuccessful competitive confrontation for larger, super jumbo
2 jets, Boeing and Airbus enjoyed many years of profitable full production of the Boeing 737 and
3 Airbus A320, with years of backlogged orders. In 2015 - 2019, as they looked to the future, they
4 began concentrating on the smaller capacity aircraft, where the demand from airlines was rapidly
5 growing. Efficient routes offered by the likes of Southwest Airlines in the United States, Ryanair
6 in Europe, and scores of new entrants and emulators in Asia and throughout the world became
7 the new standard, resulting in an explosion in air travel options that were both cost and time
8 efficient.

9 54. In October 2017, precipitated by Boeing's action to block the Bombardier C
10 Series from the United States, including unsuccessful fair-trade complaints, discounted pricing
11 on the smallest 737s to undercut the Bombardier C Series and other obstructions, Airbus acquired
12 control of that program for \$1, which set Bombardier on path to exit commercial aviation entirely
13 in February 2020. "Boeing was quick to criticize the Airbus-Bombardier alliance as 'a
14 questionable deal between two heavily state-subsidized competitors.' But to many in the
15 industry, it looked as if Boeing's strategy had backfired. Not only could Bombardier now enter
16 the U.S. market with a sleek new fuel-efficient plane against which Boeing could offer no
17 alternative – at least not without undermining its pricing for its smallest 737s – but it also had
18 unwittingly strengthened the market position of its archrival, Airbus." Pearlstein, "Boeing and
19 Airbus, the new 'super duopoly.'"

20 55. "So Boeing decided it had no choice but to respond in kind and began serious
21 negotiations to buy the commercial aircraft division of Embraer," confirming these discussions
22 in December 2017, and announcing its plan in July 2018 to purchase 80% of Embraer's
23 commercial aircraft business for \$4.2 billion. *Id.* Having failed in the attempt to use legal
24 maneuvering and political influence to preserve their highly profitable duopoly, Boeing and
25 Airbus sought to acquire competitive threats.

1 56. Boeing’s planned purchase of Embraer triggered an investigation by the European
 2 Union’s antitrust regulators, given that it would have removed Embraer as the third-largest
 3 competitor in the highly concentrated single-aisle market. Meanwhile, Embraer prepared for the
 4 purchase by separating its commercial aircraft unit and aligning its product plans with Boeing.

5 57. Under pressure from the 2019 Boeing 737 MAX crisis, in which faulty product
 6 design is widely believed to have resulted in numerous fatalities, which shut down all flights of
 7 that aircraft, as well as the subsequent COVID-19 pandemic in 2020, Boeing abruptly withdrew
 8 from the purchase of Embraer in April 2020, triggering Embraer to initiate arbitration, alleging
 9 that Boeing had “manufactured false claims as a pretext to seek to avoid its commitments to
 10 close the transaction.” Embraer’s future remains uncertain, and it is reported to be exploring
 11 partnerships with potential partners from India, China, and Russia.

12 58. Thus, despite the failed Embraer purchase, actions by Boeing over the past few
 13 years have reflected the momentum for the continued consolidation of the already highly
 14 concentrated short-haul market, eliminating Bombardier as a competitor, and leaving Embraer
 15 hobbled, without a strategic partner and urgently in need of new investors, mid-pandemic.

16 59. Meanwhile, competition from new entrants is stifled by the Boeing-Airbus super
 17 duopoly’s vast technological and infrastructural critical-mass advantage, and financial scale
 18 advantages, including modeling and engineering complexities that multiply when scaling up to
 19 larger airframes. There is also a substantial advantage conferred by aggressive subsidies and
 20 protectionist trade policies that both Boeing and Airbus have enjoyed from their respective
 21 governments, in exchange for providing jobs. This support for “national champions” has, for
 22 Boeing and Airbus, led to limited pricing pressure, years of profitably-priced backlogs, and
 23 stable pricing and profitability. For instance, in recent years, Boeing has “benefited from billions
 24 of dollars in subsidies from the States of Washington, South Carolina and Missouri,” “federal
 25 subsidies it received by way of loan guarantees from the Export-Import Bank,” and “research

1 and development subsidies embedded in the tens of billions of dollars of Pentagon contracts on
2 Boeing's order books." Pearlstein, "Boeing and Airbus, the new 'super duopoly.'"

3 60. Additionally, Boeing and Airbus reap the benefit of captive profits from their
4 defense aviation businesses, which are perceived as strategic national security assets for the
5 United States and Europe, respectively.

6 61. Many aircraft OEMs around the world have been subsidized by their home
7 nations to move up the technology and industrial hierarchy as "national champions" within the
8 aviation industry, including Bombardier (Canada); Embraer (Brazil); Dassault (France); Fokker
9 (Netherlands); COMAC (China); Yakovlev and Ilyushin (Russia); among others. In fact, when
10 lobbying for support of its acquisition of Embraer, Boeing asserted "that government-subsidized
11 competitors from China, Japan, and Russia are the real competitive threat looming on the horizon
12 and that allowing Boeing to take over Embraer will put the American champion in a strong
13 position to withstand that 'unfair' competition." *Id.*

14 62. This form of support has been provided as well to "national champion" engine
15 OEMs such as Safran, which has long been a beneficiary of the EU and the French Republic in
16 ways that may violate EU competition laws, United States antitrust laws, and treaties that the EU
17 has entered into with other nations. In fact, the French Republic is by far the largest shareholder
18 of Safran, with 11.2% of the shares of the conglomerate, and a disproportionate 17.2% of the
19 voting rights. Recent examples of support to Safran that distort competition in the markets
20 identified and developed by Zunum include: a € 300M loan from the European Investment Bank
21 to Safran in 2009 under the European Clean Transport Facility; a sharp increase in funding in
22 June 2020 for the Civil Aviation Research Council (Safran is a leading member and current
23 Chair), equaling € 1,500M (approximately \$1.8 billion), to accelerate research on a green jetliner;
24 and even greater support under France's "big green recovery plan" of September 2020.

1 63. Meanwhile, commercial airlines have also undergone tremendous consolidation
2 over the past decade such that over 80% of domestic aviation in the United States is controlled
3 by just four carriers – United, Delta, American, and Southwest – leading to higher fares, poorer
4 service, and fewer routes. The United States has just 10 mainline carriers, down from 18 just
5 over a decade ago.

6 64. The consolidation has been even more severe among regional carriers that serve
7 short-haul routes. While approximately 100 carriers accounted for 90% of the market for short-
8 haul flights in the 1980s, only five carriers accounted for this same market share in 2012, and
9 this trend has continued. The consolidation has come with a scale-up of the regional fleet driven
10 by the economics of large jet engines. Aircraft in the regional fleet expanded from 20 seats on
11 average in 1980, to 60 seats in 2010, and are now standardizing to 80 seats or greater with aircraft
12 OEMs such as Embraer following suit.

13 65. The scale-up has left vast unserved and underserved communities in its wake as
14 commercial air service has become concentrated in just a few large hubs. For example, the State
15 of Washington has roughly 140 airfields, 63 of which are included in the national airport system
16 under the National Plan of Integrated Airport Systems (“NPIAS”), and yet commercial service
17 has consolidated to such a degree that 96% of all traffic is limited to just two airfields. This
18 pattern has been replicated throughout the United States and around the world as smaller aircraft
19 in the global commercial fleet have been swept aside by larger single-aisle aircraft, with dire
20 impact to consumers, who are often left with no little or no alternative other than slow journeys
21 on highways. The impact is illustrated by the fact that nearly 95% of long-distance travel (over
22 100 miles) in the United States is to destinations within 1,500 miles, and over 90% of this travel
23 is by highway.

24 66. This long-running consolidation of commercial aviation is “leading to a less than
25 fully competitive aerospace sector in which there are only two giant parts makers and two or

1 three engine makers supplying two giant aircraft manufacturers, which in turn supply only three
2 or four giant airlines.” Pearlstein, “Boeing and Airbus, the new ‘super duopoly.’” The level of
3 consolidation “has already reached the point where it is producing outsize profits, higher prices
4 for consumers and declining rates of investment and innovation.” *Id.* In sectors such as aviation
5 where there are already only a few competitors and high barriers for any new players to enter,
6 there is a critical need to protect entrants from the anticompetitive actions of the incumbents, and
7 of their supporting nations.

8 67. Meanwhile, fuel is roughly 20% of the operating expense of a commercial airline,
9 and it is the largest variable element. In addition, airlines face increasing pressure from
10 consumers and regulators to reduce fuel emissions to help combat climate change and improve
11 air quality, particularly in the vicinity of the airport hubs, which are generally located near major
12 metropolitan areas. Increasing numbers of carriers are charting paths to net zero emissions. In
13 September 2020, for instance, the 13 airlines in the Oneworld Alliance committed to net zero
14 emissions by 2050.

15 68. This vast sector of the economy, the aerospace OEMs and the short-haul
16 operations of the commercial airlines, is on the cusp of the greatest transformation since the
17 advent of the jet age 70 years ago. Novel propulsion systems tailored to short-haul flights,
18 benefiting from the fast pace of electrification of ground transportation, will initially complement
19 and then supplant jet engines over the coming decades, thus increasing consumer choice while
20 simultaneously reducing the environmental impacts of air emissions and noise pollution.

21 69. Zunum’s business model and value proposition was focused on releasing this
22 monopolistic stranglehold by serving the vast unmet need for economical, fast, and efficient
23 short-haul travel. Zunum planned to do this by developing novel propulsion systems and aircraft
24 tailored specifically to the needs of consumers and airlines in this market, which are necessarily
25 unlike current aircraft and jet engines designed for medium-haul distances and beyond.

1 Accordingly, in July 2020, Roland Berger, a leading European consultancy, published a roadmap
2 to net zero emissions for aviation, advising the industry to “invest in new propulsion technologies
3 and deploy them for range-appropriate missions.” The technologies listed for missions to 3,700
4 miles, fully electric, hybrid-electric, and hydrogen fuel cells, are optimally addressed by
5 Zunum’s power source-agnostic, hybrid-to-electric aircraft propulsion.

6 70. The explosive worldwide growth of companies such as Tesla, Inc., has been
7 driven by such transformational adaptation and disruptive technology. By becoming the first-
8 mover for innovative electric ground vehicles, even with limited market penetration, Tesla has
9 achieved a market valuation of \$578 billion as of December 11, 2020. That value is greater than
10 four times that of the combined legacy “Big Three” United States automakers, which have lagged
11 Tesla’s agility and innovation: General Motors, \$60 billion; Ford, \$36 billion; and Chrysler
12 (including Fiat), \$37 billion (totaling \$133 billion). In fact, Tesla is the most valued automaker
13 worldwide by far, such that its value far exceeds that of the combined market valuation of the
14 next three largest auto makers: Toyota, Volkswagen, and Daimler.

15 71. In November 2018, 13D Global Strategy & Research, an independent institutional
16 research firm, published an installment of its weekly publication, “What I Learned This Week,”
17 explaining that, “[t]he trillion-dollar global aviation sector is on the brink of massive disruption.
18 Electric propulsion will completely reinvent the industry.” This article highlighted that the type
19 of disruption that occurred in the automobile industry would inevitably occur in the aviation
20 industry such that “the transformation of the global aviation sector may be one of the major
21 investment opportunities of the century.”

22 72. The potential of Zunum to do to Boeing what Tesla did to entrenched automakers
23 represented an existential competitive threat to Boeing’s dominance of the single-aisle market,
24 triggering an aggressive response similar to its actions against Bombardier and Embraer. This
25 competitive pressure on Boeing has since been compounded by the operational pressure due to

1 the Boeing 737 MAX safety issues, which grounded this fleet, and the financial pressure due to
2 the COVID-19 pandemic.

3 73. Innovative, market-leading technology, coupled with effective and nimble
4 execution, are the hallmarks of the first-mover advantage. If another party slows down or
5 otherwise impedes the first-mover's progress, it can foreclose the first-mover's advantage in the
6 market, which potentially sets this blocking company up to exploit the first-mover advantage
7 itself and leverage its way into a dominant position in the market, or to protect its existing
8 position if it is already a dominant player in the same or a related market.

9 74. While Tesla came to market with intellectual property that included significant
10 trade secrets, it did not invent the automobile, the battery, or even smooth integration of both.
11 But its numerous innovations in integrating the two – software, algorithms, novel assemblies,
12 and devices – were the competitive boost that led it to the front of the pack.

13 75. Prior to Zunum's emergence from operating in stealth mode in early 2017, the
14 prevailing view among airlines and aircraft manufacturers, including Boeing, as well as industry
15 analysts and economists, had long been that hybrid-electric or all-electric propulsion systems
16 were not technologically or economically viable, especially not before 2040 or beyond.

17 76. For example, in 2016, the National Academies of Sciences, Engineering, and
18 Medicine published a report funded by NASA, entitled, "Commercial Aircraft Propulsion and
19 Energy Systems Research: Reducing Global Carbon Emissions." This report reflected the
20 collective perspective of the major aerospace OEMs at the time, and it recommended a 30-year
21 national research agenda that the United States de-emphasize hybrid-electric propulsion systems,
22 high-power batteries, hydrogen fuel cells, superconducting motors, and generators, especially
23 because the near-to-middle term opportunity was projected to be futile. As reflected in this
24 report, the conventional wisdom among the OEMs of the primary components of the propulsion,
25 electrical systems, and aircraft frame was that the batteries and other technologies necessary to

1 achieve hybrid-electric or all-electric propulsion would continue to not be cost-competitive and
 2 weigh too much, resulting in greater energy requirements, and therefore, would continue to be
 3 infeasible for decades to come.

4 77. Meanwhile, in October 2016, Safran published a paper describing “the
 5 perspective of Safran Group” on electrified propulsion at the Greener Aviation 2016 Conference,
 6 entitled, “Long-Term Hybrid-Electric Propulsion Architecture Options for Transport Aircraft.”
 7 This paper set forth Safran’s expected timelines for the introduction of a range of electrified
 8 aircraft, by class:

Class of Aircraft	Takeoff Power	Entry to Service		Zunum Lead Years
		Safran	Zunum	
Commuters	1 MW	2041	2021	20
Regionals (50-100 seats)	2-5 MW	2049	2025	24
Single-aisles (100-150 seats)	5-10 MW	2054	2030	24

13 78. Safran’s timelines for “series hybrid” aircraft are shown in the table above, along
 14 with timelines that Zunum disclosed to Boeing for its family of series hybrid aircraft while under
 15 due diligence in that period. Safran’s anticipated timeline was two decades or more behind
 16 Zunum, consistent with the perspectives expressed in the report by the National Academies of
 17 Sciences, Engineering, and Medicine.

18 79. Zunum operated in stealth mode from 2013 to 2017 to protect this substantial
 19 first-mover advantage based on the uniqueness of its technology while executing on the initial
 20 phases of its business plan. While operating in a stealth mode, Zunum engaged a wide array of
 21 industry stakeholders, such as carriers, communities, regulators, and funding agencies, to
 22 validate and refine the disruptive technologies that it had identified and developed. Starting in
 23 2015, Zunum also applied to a range of federal agencies that are critical sources of early
 24 financing for engineering ventures. This included the National Science Foundation (“NSF”), the
 25

1 Department of Energy (DOE), the Advanced Research Projects Agency-Energy (“ARPA-E”),
 2 NASA, the Department of Defense, and the FAA. However, Zunum’s proposals were repeatedly
 3 impeded by the assertions of the entrenched major manufacturers that hybrid propulsion was not
 4 viable ahead of the 2040s, and that the focus of electrification must be on the existing Boeing
 5 and Airbus fleet, *e.g.*, the Boeing SUGAR project, with minimum ranges of over 3,500 miles
 6 and minimum capacity of 150 seats. Meanwhile, venture investors viewed Zunum as potentially
 7 viable, but ill-suited to venture funding. A successful hardware investor noted about Zunum in
 8 2015, “This is probably going to work out for someone eventually but this is a DOE investment,
 9 not a venture investment.” A founder that successfully sold a company to Boeing noted in 2015
 10 that “I think one alternative is that they need to stake out a strategy that includes teaming with
 11 one of the airframers (Boeing, Cessna, Embraer, etc.) once they have some proprietary
 12 technology locked down to keep from being over-run.”

13 **B. Zunum’s Intellectual Property, Trade Secrets, and Proprietary Information**

14 80. Zunum’s breakthrough “range optimized” aircraft are built on series hybrid-to-
 15 electric propulsion, where the aircraft is powered entirely by electric motors that receive
 16 electricity from one or two sources of power, such as batteries, turbogenerators, or hydrogen fuel
 17 cells. They may have a hydrocarbon-fueled engine, but it is smaller than typical, uses less fuel,
 18 and is designed for replacement with less polluting sources, including fuel cells or batteries, as
 19 these technologies achieve anticipated performance improvements during an aircraft’s life.

20 81. Zunum’s proprietary information includes a large body of designs, analyses,
 21 modeling, development tools and platforms, algorithms, prototypes, test data, and forecasting
 22 concerning the market opportunity and the technical elements that would allow Zunum to
 23 develop the aircraft and propulsion systems, enter the market, and execute on the opportunity in
 24 order to seize the first-mover advantage.

1 82. In recent decades, oversized flying tubes have pushed customers through rigid
2 hub-and-spoke routes, with 100+ passenger units racing to high altitudes and high speeds,
3 burning inefficient amounts of fuel, time, and money. To get a family of seven in Olympia,
4 Washington to a wedding in Nampa, Idaho means an 8-hour drive, or a drive-park-wait-fly-rent-
5 drive combination of 6 to 11 hours, using Sea-Tac and Boise airports.

6 83. Direct point-to-point routing enabled by Zunum flights, using local airports, cuts
7 that time to two-and-a half hours door-to-door at a commercial price point, with less fuel, less
8 impact on the environment while providing an experience akin to private jet owners. There are
9 two or more Zunum-suitable airports in each of Olympia and Nampa proper, just as there are
10 tens of thousands of local and municipal facilities around the United States that can
11 accommodate smaller craft to provide a closer point-to-point fit for more customized travel. The
12 paradigm shift impacts over 95% of long-distance travel in the United States to destinations of
13 less than 1,500 miles, where no good alternatives exist. Commercial air has consolidated to a
14 few large hubs. High-speed rail, or even the hyperloop, if realized, is fast along its spine, but not
15 for off-spine trips. High-speed rail is also notoriously capital-intensive, such that any
16 deployment in the United States would be limited to a few trunk routes, already served by
17 commercial air. As a result, door-to-door times have not declined over the last 50 years, and
18 large numbers of smaller communities are increasingly disconnected from the global air system,
19 impacting investment and employment. Reversing this trend could increase domestic air travel
20 by 50% to 75%, improve productivity, enable living and working less tethered to large cities,
21 and rejuvenate rural and other less densely populated communities, all while taking short-haul
22 air to net zero emissions.

23 84. The tangible innovations that Zunum shared with Boeing included, without
24 limitation: (i) fundamental reconfigurations of the aircraft and propulsion system; (ii) selection
25 and configuration of power sources onboard; and (iii) propulsion electrical systems and

1 components thereof; and (iv) propulsors and components thereof. These tangible innovations
2 are the product of many additional trade secrets, including Zunum's design process, which were
3 also shared with Boeing. Zunum has patented numerous items (some of which, on information
4 and belief, Boeing has claimed as if it invented them, to be addressed elsewhere, as sufficient
5 facts develop), but has also relied on trade secret protection for dozens of separate tangible and
6 intangible devices and tools.

7 i. For example, at the time of discussions with Boeing, the prevailing
8 industry thought was that commercial hybrid-electric aircraft were at least
9 20 years in the future, and even then, likely only mild parallel-configured
10 hybrids. Zunum undertook to change hybrid aircraft powering to strong
11 series-configured hybrid-to-electrics, tailored to and optimized for short-
12 haul missions where these technologies would have immediate
13 impact. The series-configured hybrid supplements batteries or other
14 energy storage technology with an optional combustion engine or
15 hydrogen fuel cell, which, with the matching aircraft design, results in
16 large efficiency gains, which continue to increase over the life of the
17 aircraft. These efficiencies are due in part because any engine is actually
18 in use for only a fraction of the flight duration, so the optional combustion
19 engine or hydrogen fuel cell only needs to supplement the battery as
20 needed for limited durations of flight time. That, in turn, means that the
21 engine is smaller, the fuel use is lesser, the overall emissions are lesser,
22 and the operating costs are lesser. In contrast, a parallel configuration
23 uses the battery and motors to supplement the fueled engine, which
24 remains the prime mover, staying on for the full flight. The
25 correspondingly small reductions in fuel burn delivered by the typical

1 parallel battery and engine configurations led to a conventional wisdom
2 that hybrid and battery flight are realistic only in the distant future and
3 uncompetitive economically in the near to mid-term. The hardware and
4 software needed to make this series configuration viable are a large
5 number of interdependent specifications, and include items ii, iii, and iv
6 below, as well as numerous bespoke design considerations, including
7 unique generator and battery placements, propulsor rotor designs, and
8 propulsion system weight distributions.

9 ii. By way of another example, Zunum's aircraft are power source-agnostic,
10 designed to adapt to the continuous development of technologies such as
11 turbines, batteries, and fuel cells driven by ongoing investments in
12 decarbonization across sectors. For instance, ground-transport batteries
13 have experienced radical improvements in energy density, cost, and
14 safety. Electrical output from different batteries is fungible. Using a
15 flexible battery integration mechanism with a battery-agnostic powering
16 apparatus allows the Zunum aircraft and powertrain to adapt to use
17 different presently available batteries, and use varied future
18 batteries. Ground-transport batteries will continue the same inexorable
19 evolution to greater energy densities, lower costs, and improved safety as
20 has happened every year for the last decades, not unlike the continuous
21 improvement that has occurred in integrated chips in computers. A
22 Zunum aircraft that can fly at competitive door-to-door speeds presently
23 with a fixed fuel load will fly that same route faster and with less fuel and
24 emissions with a battery that is, for example, twice as dense in several
25 years and at even lower costs. At some convergence point, no internal

1 combustion engine will be necessary. The continuous evolution of
2 improvements in battery technology is accommodated by Zunum's
3 present technologies, including the eventual removal of the internal
4 combustion engine.

5 iii. As a further example, Zunum's aircraft's propulsion electrical systems are
6 customized and designed to yield extraordinary efficiency and adaptation
7 to the varying power requirements during different phases of taxi, climb,
8 cruise, and descent, across a wide range of operating altitudes and speeds.
9 They use algorithms and control systems drawing power from the most
10 efficient combination of power sources for each phase. Those algorithms,
11 source code programs, and hardware and software controls, are trade
12 secrets that Zunum has developed and protected. Ordinary aircraft have
13 vast power consumption during each phase, including because the primary
14 engines (kerosene-fueled) are always fully operating, even if throttled
15 back. Numerous design innovations and novel mechanical systems have
16 been implemented by Zunum to achieve their novel hybrid-to-electric
17 propulsion electrical systems such that they perform this function within
18 the unique weight, safety, and cost requirements of commercial aviation,
19 at least two decades or more ahead of when others asserted this could be
20 done.

21 iv. As another example, Zunum's electric propulsors achieve very high
22 efficiencies and low noise by extending bypass fan technology to low and
23 ultra-low pressures for short-haul flights, while allowing for optimal
24 coupling with simple, lightweight electric machines rather than extremely
25 complex jet engines. Unlike a conventional bypass fan, the design of

1 which is constrained by the need to ensure proper functioning of the jet
2 engine, the Zunum electrically-driven fan is freely optimized across the
3 fan and electric motor. This novel fan and motor assembly is uniquely
4 integrated into a quiet propulsion unit for far lower noise and far greater
5 simplicity, comprising additional design innovation and novel
6 mechanical, electrical, and thermal systems to maximize efficiency, while
7 minimizing cost and noise. To fully realize the potential of the electric
8 propulsor, Zunum also developed proprietary algorithms and platforms
9 for the integrated design of such electric propulsors, and the
10 synchronization of this design with aircraft design cycles.

11 85. Zunum's calculational innovations that were shared with Boeing included
12 fundamental re-modeling of aircraft design assumptions and equations, manifesting in numerous
13 insights that drive novel designs and which enable novel solutions to what were until recently
14 fundamental constraints on aircraft performance parameters. For example, because conventional
15 kerosene-fueled jet engines have been a mainstay of modern air travel, certain baseline
16 assumptions have been held steady in aircraft design and use models for decades. The jet engine
17 is most efficient at high altitude and high speeds; however this combination requires very high
18 power. This is evident in definition of power required as velocity times drag force; at a constant
19 altitude drag scales as the square of velocity such that power required is a cubic mathematical
20 function so that a doubling of the rate of airspeed at the same altitude results in increasing the
21 power required – and hence the rate of fuel consumption by 8 times ($2 \times 2 \times 2$). That is one of
22 the drivers for aircraft to fly at higher altitudes, typically 36,000 feet, where there is less
23 atmospheric pressure (which reduces air resistance once the aircraft has attained 36,000 feet, but
24 increases fuel consumption to reach 36,000 feet). By flying at lower altitudes at lower flight
25 speeds, but on more direct courses, net, actual travel times (and real speed to reach the

1 destination) are reduced. Those high altitude and high velocity inputs are also assumed to be the
2 normal operating constraints on aircraft performance because that is the optimal condition for
3 the family of kerosene-fueled jet engines that have been the mainstay of all air travel. A prime
4 example is the Boeing 737, which is designed for speeds up to Mach 0.8 and ranges of at least
5 3,500 miles. Previous approaches to electrifying aircraft retained these assumptions, leading to
6 very high energy and power requirements, which require electrical components and batteries that
7 are not likely to be available for the next decade or more. Moreover, the resulting aircraft, like
8 the 737, are not designed to be maximally efficient for flights less than 1,500 miles even though
9 80% of all commercial flights are less than 1,500 miles, and flights of less than 400 miles
10 generally yield extreme inefficiencies resulting in fuel waste.

11 86. By focusing on the design parameters for air travel less than 1,500 miles, thus
12 reducing payload and speed requirements, Zunum's optimized aircraft and propulsion
13 specifications yield much higher net door-to-door speeds based on more-direct routing that
14 leverages a much larger fraction of the existing airfields than receive commercial air service
15 today. Lower payload and speed, coupled with a novel hybrid-to-electric propulsion system,
16 enables Zunum to optimize performance over a vast range of design parameters, based on
17 different and innovative calculational approaches. Boeing engineers have confirmed by their
18 own words that these approaches are novel, surprising, and had been unrealized and unknown to
19 Boeing until revealed by Zunum. While Zunum has developed tangible, mechanical, and design
20 manifestations that are themselves trade secrets, the underlying trade secret generator is the
21 calculational and conceptual paradigm that itself is a complex and proprietary trade secret, but
22 which yields watershed changes, including scores of consequent innovations.

23 87. This paradigm shift upends well-known calculational tradeoffs in the commercial
24 aviation industry of range, speed, and payload. Range drives speed, requiring a heavier aircraft,
25 and larger engines. Range also drives weight of fuel, which results in a still-heavier aircraft and

1 even larger engines. Zunum solved the universal range-speed-payload trade-off in a previously
2 unknown way, building on the capabilities of rapidly improving power sources and electrical
3 components, by developing novel propulsion that scales to smaller aircraft in ways that kerosene-
4 fueled jet engines do not and also aircraft powered by this novel propulsion uniquely tailored for
5 commercial flights under 1,500 miles. Zunum has undertaken those tangible solutions, many of
6 which are novel, including some patented and some protected as confidential information and
7 trade secrets. But the underlying paradigm, the calculations and modeling that enabled the new
8 market space, and then the studies and plans that derive from it, themselves were all unknown to
9 Boeing, and acknowledged as such by disbelief, skepticism, and even jealousy.

10 i. The actual design responses to the new market space enabled by the
11 calculational outcomes are many. Electrically powered propulsors
12 optimized for lower speeds are far simpler than extremely complex jet
13 engines. All propulsive power being electrical means that an innovative
14 series architecture enables aircraft that are uniquely power source-
15 agnostic, adopting future power sources as these evolve, while drawing
16 power from these sources on every flight to minimize energy used. This
17 also enables uniquely safe aircraft using components and power sources
18 provided by third parties at modest cost and weight.

19 ii. Instead of misapplying to short-haul flights single-aisle aircraft that were
20 designed for traveling thousands of miles, Zunum's aircraft are purpose-
21 built from the ground-up to fly short-haul routes in a wholly different way
22 and at lower operating costs. Both the conceptual realization, and the vast
23 number of design solutions resulting therefrom, were previously
24 unknown. Boeing's prior lack of awareness of, then its expressed interest
25 in, and then its competitive attempt to emulate Zunum's aircraft, all

1 showed the valuable and innovative nature of these new approaches,
2 which Zunum duly protected as trade secrets.

3 iii. The opportunities that Zunum's design innovations have yielded to date
4 have resulted in other engineering and technical developments. Resulting
5 trade secrets included, without limitation, (a) quiet propulsion via novel
6 electric ducted fans optimized for ranges and speeds of the hybrid-to-
7 electric aircraft; (b) optimal scaling that enables an earlier market entry
8 and lower certification risk via Federal Aviation Administration Part 23;
9 (c) novel aircraft and propulsion systems that scale to single-aisle
10 airliners; and (d) component simplification, reducing purchase price,
11 maintenance required, and operating costs, across a range of commercial
12 aircraft.

13 iv. Zunum's economic studies, leveraging data re-analysis and mining,
14 developed heretofore undiscovered correlations between operating cost
15 and size and range, led to detailed business cases, and plans relating to
16 markets for which kerosene jet engines are inherently inefficient. The
17 secret work on a new paradigm, new calculational tools, and trade studies
18 and business plans, fleshed out a whole new business model. Zunum
19 developed these all and shared much of them with Boeing, including the
20 information that these new aircraft would exceed the performance of
21 Boeing's 737 product line on short-haul flights.

22 88. These trade secrets, which included Zunum's hybrid-to-electric aircraft and
23 propulsion technologies, were unknown in the marketplace, and provide the foundation for
24 Zunum's competitive advantage across several key metrics, such as cost, noise, and emissions.
25 In fact, Boeing had previously rejected these concepts before Zunum's innovative and disruptive

1 technology demonstrated that these concepts were economically and technologically feasible and
2 marketable in the very near term.

3 89. These trade secrets were also costly to develop, and Zunum spent approximately
4 \$3.5 million to develop its trade secrets before its Series A investment round.

5 90. In order to protect its unique and superior technological advancements in this
6 area, Zunum guards its trade secrets vigorously. It operated in a stealth mode from 2013 through
7 early 2017. When engaging potential investors, partners, and employees, it did so only when
8 non-disclosure agreements were in place, and by strictly limiting what information was shared
9 otherwise. All Zunum employees, contractors, and advisors signed strict confidentiality
10 agreements to protect Zunum's confidential information. Zunum's computers and networks
11 have always been protected by state-of-the-art security, and public access to Zunum's facilities
12 have always been restricted.

13 **C. Zunum Develops a Relationship with Boeing**

14 91. As Zunum began to emerge from its stealth development phase, it sought outside
15 funding and a strategic partner to provide complementary industry expertise and infrastructure
16 in order to advance its technological concepts toward market production.

17 92. With high entry barriers for new entrants into this market, most investors perceive
18 that a new entrant would require billions of dollars in capital to develop a new commercial
19 aircraft. Although Zunum's technology and business plan offered a much less capital-intensive
20 path, the company still faced limited options for financing. Venture capital typically eschews
21 hardware ventures, and government funding was limited by the prevailing view at Boeing and
22 others that the electrification of commercial aircraft was decades away.

23 93. Given this dynamic, Zunum cautiously approached a few of the major aerospace
24 companies to explore investment to develop their technological concepts toward market
25 production, limiting outreach to companies where the risk of competitive conflict was lower.

1 94. Zunum identified Boeing as a prospective investor and strategic partner because,
2 at the time, Boeing did not compete in aircraft propulsion and was not developing smaller aircraft
3 tailored to short-haul flights.

4 95. On hearing that Zunum had developed low-emissions aircraft and propulsion that
5 delivered economics competitive with single-aisle airliners in commercial aircraft as small as 10
6 seats, Boeing quickly became interested in Zunum as an investor and strategic partner.

7 96. Furthermore, 2016 being the Centennial of Boeing's founding in 1916, leaders at
8 Boeing had been directed to pursue large-scale disruptive opportunities that could lay the
9 foundation for the next 100 years of growth for the company. The \$3 trillion transformation of
10 short-haul aviation proposed to Boeing by Zunum was perceived as enabling just such an
11 opportunity.

12 97. Zunum's initial introduction to key decisionmakers at Boeing was through
13 Pradeep Fernandes, then Managing Director of Integrated Product Strategy for the BCA business
14 unit, with whom Dr. Kumar was acquainted socially.

15 98. In May 2016, Mr. Fernandes invited Dr. Kumar and Mr. Knapp to an introductory
16 discussion with Michael Sinnett and Sheila Remes. Mr. Sinnett was the Vice President of
17 Product Development for BCA. Ms. Remes was the Vice President of Strategy for BCA.

18 99. BCA is the mainstay business unit at Boeing, delivering 68% of Boeing's \$95
19 billion in revenue in 2016, and is responsible for Boeing's well-known lines of commercial
20 aircraft, including the 737, 737 MAX, 777, and 787, among other platforms. In 2016, BCA
21 forecast a \$1.4 trillion opportunity for single-aisle aircraft from 2016 to 2025, and an equivalent
22 opportunity for twin-aisle aircraft.

23 100. Mr. Fernandes informed Dr. Kumar that Boeing's legal department had
24 suggested that they have the introductory meeting first to determine whether further discussion
25 was warranted, and that a formal non-disclosure agreement would not be necessary at that time.

1 Nevertheless, Mr. Fernandes understood that the meeting would be treated as confidential, and
2 he specifically told Dr. Kumar that he would not invite anyone from Boeing's Advanced
3 Concepts team, which was working on electric aircraft concepts for Boeing's much larger
4 aircrafts, "to protect both sides."

5 101. Prior to engagement with Zunum, Boeing was not focused on series hybrid
6 electric aircraft. Mr. Fernandes also told Dr. Kumar in an e-mail on April 22, 2016, that Boeing's
7 interest in electrification technology was focused on drones and other military areas, and the
8 parallel hybrid "SUGAR" program, the acronym for Subsonic Ultra Green Aircraft Research,
9 funded by NASA for single-aisle aircraft.

10 102. In advance of the meeting, Dr. Kumar sent Boeing a short presentation "for very
11 limited distribution" to provide context on Zunum. This presentation did not contain any
12 proprietary or confidential trade secrets or technological details, only broad summaries of
13 Zunum's general business model.

14 103. In July 2016, Mr. Fernandes suggested that Boeing and Zunum follow up with
15 much more extensive discussions, this time with senior personnel drawn from other Boeing units
16 such as Boeing Defense and Space.

17 104. In advance of this more extensive meeting, the parties entered into a Proprietary
18 Information Agreement, dated August 16, 2016 (the "PIA").

19 105. Between August 16, 2016, and approximately February 2017, Boeing undertook
20 extensive due diligence to evaluate Zunum's concepts, technologies, and business plans for
21 potential investment and strategic partnership whereby Boeing would provide Zunum with the
22 technical resources, with a focus on aerostructures, needed to bring its aircraft to market.

23 106. During this period of due diligence, and pursuant to the PIA, Boeing was granted
24 access to extensive details of Zunum's business plans; go-to-market strategy; patent-pending
25 aircraft and propulsion technologies; and development, production, and certification plans. This

1 included an extensive library of Zunum's confidential whitepapers, technical reports, business
2 plans, and provisional patent applications, which were provided to Boeing personnel via an
3 online data room.

4 107. This information reflected Zunum's proprietary, contrarian, and disruptive
5 blueprint to an extensive and previously unidentified \$3 trillion market for series hybrid-to-
6 electric aircraft designed specifically for short-haul flights, with a clear path to zero emissions.

7 108. Boeing had previously asserted that series hybrid electric propulsion was not
8 competitive with conventional aircraft and was unrealistic in the timeframe targeted by Zunum.
9 Published research by Boeing underlined that parallel-configured hybrid electric propulsion
10 would not be viable until the 2030s and would then only deliver modest improvements in
11 emissions. Boeing also insisted that series-configured hybrid-electric propulsion, which was the
12 focus of Zunum's technology, would not be viable until the 2040s.

13 109. However, Boeing quickly realized that Zunum had a technology portfolio and
14 business plan to execute on its market strategy that was on track to commercialize Zunum's
15 series hybrid-electric propelled ZA10 by early the 2020s, with achievement of cost-
16 competitiveness and drastic improvements in door-to-door travel time, emissions, and noise.

17 110. As part of its due diligence in determining whether to invest in Zunum, Boeing
18 held a two-day design workshop at the Zunum offices in Washington on January 23 - 24, 2017,
19 to understand the performance and operating cost estimates for the Zunum ZA10 and ZA100
20 aircraft, relative to conventional equivalents, and to validate the results using Boeing's own
21 design tools.

22 111. Attendees at this workshop included several senior executives and engineers from
23 BCA, BCA Advanced Concepts, and Boeing Defense and Space. This included:
24 (a) Steven Shumate, who was a Product Strategy Analyst for BCA; (b) Martin Bradley, Ph.D., a
25 Technical Fellow in BCA Advanced Concepts; (c) Hubert Wong, a design engineer for BCA

1 Advanced Concepts; (d) Logan Jones and two others from Boeing Defense and Space; and (e) a
2 senior representative of JetBlue Technology Ventures.

3 112. The attendees from BCA Advanced Concepts were precisely the category of
4 Boeing personnel whom Mr. Fernandes had previously excluded from meetings with Zunum
5 until an appropriate non-disclosure agreement was in place.

6 113. The agenda for the design workshop included: (a) an overview of Zunum's series
7 hybrid-to-electric aircraft and propulsion technologies; (b) detail about the key specifications,
8 metrics, and assumptions of the ZA10 aircraft; (c) an explanation of Zunum's key drivers for
9 reductions in operating costs over existing aircraft propulsion systems; and (d) a comparative
10 analysis by Boeing of the design and performance of the ZA10 aircraft, including its expected
11 sizing and operating costs.

12 114. In order to conduct this comparative analysis as part of its due diligence, Boeing
13 requested access to configuration parameters for the efficiency assumptions for Zunum's
14 propulsion system, including: (a) turbine/internal combustion engine thermal efficiency and
15 specific fuel consumption; (b) ducted fan efficiency; (c) power transmission efficiency; and (d)
16 electric motor and inverter efficiency.

17 115. It also requested access to operational parameters for: (a) energy consumption for
18 flight mission segments such as taxiing, takeoff, cruising, and descent; (b) mission reserve
19 requirements for fuel and electricity; (c) direct operating costs and assumptions for fuel and
20 electricity prices, airframe, and engine maintenance and reserves; and (d) battery performance.

21 116. All the data that Boeing requested and that Zunum supplied during Boeing's due
22 diligence were proprietary, reflecting Zunum's roadmap to a breakthrough class of aircraft and
23 propulsion, to achieve advantages over competitors and open new markets, and trade secrets
24 reflecting precise specifications for how to achieve performance advantages across a range of
25 metrics. Zunum produced all such information pursuant to the PIA.

117. Through the design workshop and Boeing's ongoing due diligence, Zunum provided Boeing with voluminous documentation of its proprietary technologies, design specifications, economic analyses, computational tools, and business plans. Most of these technologies, models and specifications were previously unknown in the industry and largely ran counter to Boeing's initial assumptions with respect to the acquisition and operating costs of hybrid electric aircraft, and Zunum's analysis for reducing the operating costs for smaller, short-haul aircraft to be competitive with the economics of the larger aircraft in light of their economies of scale.

118. The inconsistency between Boeing's assumptions and Zunum's models made Boeing skeptical, and Zunum had to substantiate many of its analyses with respect to cost and performance.

119. The BCA Advanced Concepts personnel became confident in Zunum's methods, assumptions, and expertise. They agreed that Zunum's technology and design had achieved previously unforeseen advantages in energy efficiency and maintenance costs but wanted to conduct additional investigation and validation. They believed that it was very likely that the ZA10 would deliver breakthrough economics, but that the economics of the ZA100 were far more sensitive to future oil prices and electricity rates.

D. Boeing's 2017 Series A Investment in Zunum

120. In addition to financial resources, venture investors typically provide strategic guidance or other support for the companies in which they invest, to help ensure the success of their investment and also often in light of fiduciary obligations to act in the company's best interest and avoid waste.

121. This includes leading fundraising activities to cultivate and close additional investors to build upon their earlier investments. They help the companies in which they invest build value by ensuring that valuations are high enough to reward earlier investors while still

1 attracting new investors. Venture investors often engage their business partners to form
2 syndicates that come together to value and close subsequent financings, which are primarily
3 motivated by financial return.

4 122. Strategic early-stage investors, which are businesses with investment arms that
5 fund nascent companies, share the goal similar to venture capitalists of having a positive financial
6 return on their investment, but unlike venture capitalists they focus their investment in areas of
7 strategic interest to the corporation's current or future core businesses as a means of augmenting
8 their new product development efforts, often by forming a joint venture with the start-up
9 company or ultimately acquiring the start-up company.

10 123. For both traditional venture investors and strategic investors, their role as anchor
11 or lead investor often includes leading subsequent financing rounds by helping to attract
12 additional financial support to build upon an initial investment.

13 124. Boeing also understood that if it abandoned support for Zunum after previously
14 investing, it would signal a lack of confidence in Zunum, undermining Zunum's reputation and
15 damaging its ability to attract further investment, a reality that Boeing used to help keep Zunum
16 beholden to it. Boeing's dominant position in aviation and areas of expertise led most
17 prospective aviation investors to use Boeing's interest as a barometer of the value and wisdom
18 of an investment in Zunum.

19 125. Boeing invested \$5 million in Zunum through a Convertible Promissory Note and
20 Note Purchase Agreement dated March 17, 2017 (together the "2017 Note").

21 126. The 2017 Note was accompanied by an Investor Rights Letter effective the same
22 date (the "2017 IRL"). In the 2017 IRL, Boeing obtained the right to appoint a non-voting
23 Observer on Zunum's Board of Directors, subject to confidentiality provisions in the PIA and
24 2017 IRL, and the fiduciary duties attendant to corporate governance.

1 127. The 2017 IRL also gave Boeing the right to appoint a representative to Zunum's
2 Advisory Board, which was intended as a mechanism for Boeing to provide technical expertise
3 to Zunum. 2017 IRL §§ 1, 3.

4 128. JetBlue Technology Ventures also invested \$1 million, and Zunum was also
5 awarded an \$800,000 grant from the State of Washington Clean Energy Fund.

6 129. Boeing installed Mr. Jones as its Observer on Zunum's Board of Directors and
7 Mr. Fernandes as its representative on Zunum's Advisory Board.

8 130. Pursuant to the 2017 IRL, Boeing had access to information from Zunum about
9 "significant business issues" and "annual operating plans." The 2017 IRL obligated Zunum's
10 management to "meet with Investor [Boeing] regularly during each year at the Company's
11 facilities . . . for such consultation to discuss such issues and to review progress in achieving said
12 plans." 2017 IRL § 1.

13 131. Boeing had the option to increase its stake in Zunum by investing up to the lesser
14 of two times the amount of its investment in the 2017 Note or half of the additional capital sought
15 in a subsequent equity financing. 2017 IRL § 8.

16 132. In addition, the 2017 IRL gave Boeing a right to notice of any intent by Zunum
17 to sell or offer any other securities, and a right of first negotiation for any contract to: "(A) design,
18 develop, or manufacture any aircraft or substantial component (for example, a wing or fuselage)
19 of an aircraft, excluding the hybrid-electric propulsion system, fuel system, energy storage and
20 terms thereof (hereinafter the 'Propulsion System'), (B) perform any assembly of, or otherwise
21 integrate into an aircraft any substantial components . . . of, an aircraft, excluding the Propulsion
22 System, or (C) maintain or otherwise support an aircraft (other than the Propulsion System) . . .
23 ." 2017 IRL § 10.

24 133. The right of first negotiation required Zunum to give Boeing notice of its intent
25 to enter into any contract for any such work, after which Boeing would have 20 business days to

1 provide notice of its intent to negotiate “exclusively and in good faith for the next 90 days” to
2 perform the scope of work. *Id.*

3 134. The right of first negotiation reflected Boeing’s proposed relationship with
4 Zunum, whereby Boeing had an initial exclusive opportunity to bid to become a supplier to
5 Zunum for elements of its aircraft, excluding the propulsion system.

6 135. This right of first negotiation is also something for which only a strategic
7 corporate investor, as opposed to a venture investor, would negotiate. It reflects that Boeing saw
8 the potentially greater opportunity for Boeing to earn revenue and reap profits directly from
9 Zunum’s business, not just through its return on its limited investment in Zunum.

10 136. Further to the clause, Mr. Jones told Dr. Kumar that Boeing was interested in
11 being Boeing’s aerostructures partner. Zunum had already determined that it would contract out
12 a significant portion of the aerostructures, and Boeing had considerable expertise in the area.
13 Accordingly, to avoid Zunum having to hire any aerostructures engineers, Mr. Jones told Dr.
14 Kumar that Boeing was prepared to supply an aerostructures team to support Zunum promptly
15 after closing of the March 2017 investment. This was consistent with what Boeing told Zunum
16 in the prior weeks and months.

17 137. Approximately one month after Boeing’s investment in Zunum, Boeing
18 announced the formation of HorizonX, Boeing’s venture capital and business incubation arm,
19 that would manage Boeing’s investments, including its investment in Zunum. Boeing and
20 Zunum aligned their public launches to occur on April 5, 2017, such that Boeing announced
21 HorizonX on that day, disclosing that Zunum, which was emerging from its stealth development
22 mode on that day, was its first investment.

23 138. HorizonX managed Boeing’s investment in Zunum through an investment
24 committee that included Boeing’s Chief Executive Officer, Chief Financial Officer, and Chief
25 Technology Officer.

1 139. HorizonX was formed to coincide approximately with the Boeing Centennial to
2 lay the groundwork for the next century by investing in innovative ventures as a corporate
3 venture arm, while also launching disruptive businesses within Boeing.

4 140. Although HorizonX was not officially incorporated until August 23, 2017, the
5 group at Boeing that would eventually staff HorizonX began holding themselves out earlier as
6 representatives of HorizonX. At all times, HorizonX personnel had the same e-mail address
7 suffix as Boeing employees. HorizonX's offices were also co-located in Boeing facilities. Mr.
8 Jones and Mr. Fernandes both took on Managing Director roles at HorizonX. Mr. Jones moved
9 from Boeing Defense and Space, and Mr. Fernandes moved from BCA, to lead HorizonX's
10 Disruptive Innovation, responsible for developing disruptive businesses within Boeing.

11 141. Boeing, under the auspices of the yet-to-be-formed HorizonX, also appeared to
12 take steps to fulfill its commitment to lead Zunum's Series B investment round and to provide
13 technical expertise to support the development of Zunum's flagship aircraft.

14 142. For example, in July 2017, Justin O'Brien, who was involved in HorizonX's
15 strategic development, developed a plan to engage external targets to promote the relationship
16 between Boeing and Zunum. Mr. O'Brien developed a set of talking points for external
17 engagement that held Boeing out, under the auspices of HorizonX, as a "formal technical
18 advisor" to Zunum and represented that Boeing was "looking for opportunities to provide
19 technical advice to enable Zunum's success."

20 143. Boeing's investment and these indicia made it initially appear to Zunum as though
21 Boeing was following through on its commitments by undertaking what it said that it would do:
22 invest in Zunum; lead fundraising; and collaborate with Zunum on the development and
23 commercialization of its aircraft.

1 144. Following Boeing's investment, Zunum also received investment interest from
2 Safran and UTAS. Zunum also began engaging with SHE to supply a turboshaft range-extender
3 for Zunum's hybrid-to-electric propulsion system.

4 **E. Boeing Seeks Additional Information, Ostensibly to Support ZA10 Aerostructures**

5 145. Following its investment, Boeing personnel, holding themselves out as HorizonX,
6 also began asking Zunum for additional information for the stated purpose of supporting Zunum
7 with the aerostructures component of the production of the ZA10.

8 146. Mr. Jones expressed frustration at Boeing's pace in providing an aerostructures
9 team to Zunum, suggesting that the delay was the result of Boeing's process to reach a decision
10 to provide Zunum with that support. Mr. Jones purported to act on behalf of Zunum in
11 shepherding the process to help ensure that Boeing would provide the aerostructures resources
12 that it had committed.

13 147. Boeing's supposed internal process to decide whether to provide Zunum with the
14 support, that its Observer on Zunum's Board of Directors had already committed, was opaque to
15 Zunum, except for occasional requests by Boeing for Zunum's proprietary information on the
16 size of the market and key customers. Mr. Fernandes appeared to be engaged, as was Mr.
17 O'Brien, who had prepared messaging for Boeing to use when engaging with customers that
18 Zunum had identified.

19 148. However, there was one request that appeared inappropriate. In June 2017, Mr.
20 Fernandes asked Dr. Kumar to help one of his strategists better understand Zunum's proprietary
21 concepts for seamless multi-modal transportation and enabling technology platforms as
22 described in a provisional Zunum patent that Boeing had been provided during prior diligence.

23 149. These proprietary claims were a key element to Zunum's hybrid-to-electric
24 aircraft offering door-to-door travel two to five times faster than conventional aviation by
25 integrating emerging electrified and autonomous ground transport modes with short-haul aircraft

1 serving community airfields to enable fast, seamless, door-to-door journeys, unlike the time-
2 intensive airport hub-to-hub travel that exists today.

3 150. There was no justification for a strategist on Mr. Fernandes' team, tasked with
4 developing disruptive businesses within Boeing, to be using Zunum proprietary materials on
5 future multi-modal travel for any such purpose. Dr. Kumar met with the strategist but declined
6 to provide any detail other than to note the proprietary nature of that provisional patent.

7 151. Other than this, Boeing's investigation into Zunum's innovations and
8 technologies was, by all outward appearances, consistent with its stated purpose to support
9 Zunum to achieve early 2020s deployment of the ZA10. Zunum targeted an October 2017
10 announcement of its design and plans.

11 **F. Boeing's Clandestine Program to Pursue and Preempt Zunum's Plan Comes into**
12 **View**

13 152. In August 2017, Mr. Sinnett participated in an interview with *Aviation Week*, a
14 well-known trade publication, where he confirmed that "a small experimental 'X-plane' hybrid-
15 electric demonstrator planned for the early 2020s could signal an unprecedented push into the
16 commuter market" and "could open the door to a new generation of small Boeing airliners
17 seating 12-50+. The initiative, if sanctioned, may lead to a new product line from the mid-2020s,
18 effectively taking the manufacturer full circle to its commercial transport roots."

19 153. In fact, Zunum had just received approval from its Board of Directors to proceed
20 with a 12-seat variant of the ZA10 aircraft, and was preparing to announce this publicly in
21 October, targeting entry to service in 2022, ahead of a planned 50-seat regional aircraft in the
22 mid-2020s. As someone heavily involved in Boeing's prior due diligence of Zunum, Mr. Sinnett
23 was aware of Zunum's product plan, market timing, and funding needs, and may have intended
24 to preempt the upcoming Zunum publicity.
25

1 154. Mr. Sinnett explained that Boeing had been attracted to Zunum's expertise in
2 powertrain and power conversion and that Boeing provided complementary strengths for
3 integrating the other aircraft components. He acknowledged that this opportunity was outside of
4 Boeing's typical mainstream business and a market segment in which Boeing was not previously
5 active. However, his published interview communicated that Boeing, not Zunum, was assessing
6 market entry.

7 155. In an exchange with Dr. Kumar following publication of this article, Mr. Jones
8 admitted that Mr. Sinnett's announcement was highly inappropriate and contrary to Boeing's
9 intent to support Zunum with commercializing the ZA10 and ZA50 aircraft. He asserted that the
10 interview was a mistaken action by a "loose cannon," that it was nothing other than internal
11 politics, and was not supported by Boeing or reflective of a change in Boeing's continuing
12 strategic support for Zunum.

13 156. Mr. Jones held considerable influence over Zunum, both as Boeing's Observer
14 on Zunum's Board of Directors and as gatekeeper to support from the HorizonX Investment
15 Committee for future financing of Zunum and partnership with Boeing.

16 157. Nevertheless, the two competing announcements on 12-50 seat hybrid aircraft, by
17 BCA in August, and by Zunum in October, sent conflicting messages to investors and the
18 aerospace industry.

19 158. Earlier in 2017, Zunum had recruited Waleed Said, Ph.D., as Chief Technology
20 Officer for Electric Power to lead work on the hybrid-to-electric powertrain and establish a
21 world-class center in Illinois for this purpose. Dr. Said joined Zunum after a long career at UTAS
22 (the worldwide leader in electrical systems for airlines), where he led work on the electrification
23 of the secondary systems of conventional aircraft such as the Boeing 787 (which "secondary
24 systems" include all essential control and operating systems). On hearing of Dr. Said's role at
25 Zunum, the President of Electric Systems at UTAS contacted him in June 2017 to express interest

1 in collaborating on the development of Zunum's hybrid-to-electric powertrain, leading to
2 progressive exchanges between Zunum and UTAS.

3 159. In late October 2017, Dr. Said was invited to a black-tie event hosted by UTAS
4 in New York City, where he was strategically seated at a table by the President of UTAS, who
5 informed him that he would like for UTAS to invest in Zunum.

6 160. Mr. Sinnett was also at the event and knew Dr. Said from their past work on the
7 Boeing 787 program: Mr. Sinnett had led the 787 program at Boeing, and Dr. Said had led work
8 on power electronics for the Boeing 787 at UTAS. Later that evening, Mr. Sinnett loudly and
9 physically accosted Dr. Said in an accusatory manner in front of senior executives at UTAS and
10 called him a "rogue player" who was selling out Boeing 787 technologies to a competitor,
11 Zunum.

12 161. Dr. Said gently pointed out that Zunum's aircraft had nothing in common with
13 the Boeing 787 other than a common power quality standard: the ZA10 had all-electric
14 propulsion; while electrification of the Boeing 787 was limited to the secondary systems. The
15 exchange prompted a senior executive at UTAS to intervene in case Mr. Sinnett's aggression
16 escalated.

17 162. Given the importance of Boeing's support as an early investor and strategic
18 partner, the public display of overt hostility and false accusation by Mr. Sinnett, whom leaders
19 at UTAS viewed as a key customer, was damaging to the relationship of trust that Zunum had
20 been developing with UTAS, which was building toward a collaboration and investment.

21 163. The public display of overt hostility and false accusation had the potential to
22 disrupt Zunum's business relationship with UTAS. That this was likely no coincidence came
23 into focus in light of what Zunum later learned about Boeing's use of Zunum's technology to
24 further the activities that Mr. Sinnett had announced to the media in August, and what Zunum
25 later experienced from Boeing with respect to other prospective investors and partners.

1 164. Dr. Kumar reported the incident to Mr. Jones who confirmed that Mr. Sinnett's
2 behavior was inappropriate. Dr. Kumar also reported the incident to Zunum's investors at
3 JetBlue Technology Ventures, who questioned Mr. Jones and the Vice President of HorizonX,
4 Steven Nordlund, on Boeing's support for Zunum and asked that Boeing either commit to Zunum
5 or indicate otherwise. Mr. Nordlund emphasized that Boeing was supportive of Zunum, and that
6 he and Mr. Jones would take steps to defuse the internal politics within Boeing.

7 165. In the weeks that followed, Mr. Jones continued to assure Zunum that it continued
8 to have the full support of Boeing's "C-Suite" executives who sat on HorizonX's investment
9 committee, while acknowledging tensions with a separate group that included unspecified
10 elements from BCA and HorizonX, including Mr. Fernandes (such corporate group collectively
11 the "BHE team"), that was purportedly supporting the very slow decision within Boeing on
12 aerostructures.

13 166. Mr. Jones noted that the BHE team was unable to achieve the operating costs that
14 Zunum had announced to the media in October, and that it believed commercialization would
15 take through 2024, while Zunum had targeted 2022. The BHE team was expressing concerns
16 within BCA that Zunum was "overpromising."

17 167. The difference in calculations was not surprising for several reasons. First, the
18 conventional consensus among the aerospace OEMs was that hybrid-electric or all-electric
19 commercial aircraft was not economically or technologically feasible in the near-to-mid-term.
20 Second, Boeing had undertaken to analyze Zunum's design in secret rather than in consultation
21 with Zunum, which created a risk of miscommunications and misinterpretations. Third, Boeing
22 lacked familiarity with commuter aircraft certified under FAA Part 23 because the aircraft that
23 Boeing manufactures are certified under the more stringent FAA Part 25.

24 168. Mr. Jones stated that he was concerned that the discrepancies between Zunum's
25 results and Boeing's results, if left unchecked, could undermine support for Zunum among senior

1 executives at Boeing, affecting Boeing's decisions to invest in the Zunum Series B, or engage
2 on aerostructures.

3 169. To mitigate this risk, and purporting to look out for Zunum's interests, Mr. Jones
4 used his influence over Zunum's Board of Directors to pressure Zunum to host a workshop to
5 reconcile the findings of the BHE team and the actual technical specifications, feasibility, and
6 progress to date of the Zunum ZA10 aircraft. This necessarily involved disclosing additional
7 insight to Boeing's engineers and executives from BCA and HorizonX to remedy their mistaken
8 assumptions and quell their alleged concerns.

9 170. Boeing's clandestine activities began to be further exposed in late November
10 2017, when Dr. Kumar learned from Mr. Fernandes that the BHE team at Boeing was in fact
11 pursuing its own hybrid-electric aircraft. Mr. Fernandes also informed Dr. Kumar that the aircraft
12 would be commercialized with a partner for the hybrid propulsion, and that Boeing would solicit
13 bids from its existing suppliers and that Zunum was welcome to submit a bid along with the other
14 companies to provide the hybrid-electric propulsion.

15 171. Mr. Fernandes also told Dr. Kumar that Boeing had already engaged its existing
16 partners such as Safran on propulsion for the aircraft, and that there had been exchanges with
17 individuals at UTAS as well. Boeing was already the Safran Group's largest customer, and
18 UTAS was already the primary supplier of electrical systems for Boeing's larger aircraft models.

19 172. This revelation left Dr. Kumar extremely concerned, and in a subsequent debrief
20 the Zunum leaders decided that it was imperative to use the upcoming workshop with the BHE
21 team to derive clarity on what Boeing was really doing with its own internal competing hybrid-
22 electric aircraft program and what its strategic intent was regarding Zunum.

G. Zunum Discovers Boeing's Misappropriation

173. Further to Mr. Jones's insistence, Zunum held a workshop on December 12, 2017, with the BHE team to address their supposed technical skepticism and disparagement of the Zunum ZA10 aircraft and Zunum's design and technology.

174. Instead, at this workshop, the BHE team demonstrated that Boeing had actually created a new aircraft design that was not the Zunum ZA10, but that took the Zunum aircraft's specifications, insights, innovations, technology, and trade secrets and applied them to create a whole new aircraft – now called the BHE-11. Boeing personnel casually asserted that the design was "their" aircraft.

175. Concerningly, several individuals on the BHE team that copied from the Zunum ZA10 to develop the BHE-11 had been heavily involved in Boeing's prior due diligence of Zunum and were provided access to a large body of Zunum's trade secrets through that process. For example, Dr. Bradley and Mr. Shumate had also attended the January 2017 design workshop. Meanwhile, Mr. Fernandes served on Zunum's Advisory Board until November 2017, when he was replaced by Peter Kunz, Ph.D., the Chief Technologist of HorizonX.

176. This revelation showed an aircraft that Boeing's team purported to be its own design of a new market entrant, the BHE-11, to target the same market opportunity that the Zunum/Boeing team was ostensibly working together to address with the ZA10. The context of the discussions revealed that this was not a friendly, skeptical exercise, but a new competing design that Boeing seemed to think was its own market entrant.

177. Zunum's meeting participants were baffled and troubled by this surreal situation in which Boeing, under the guise of seeking to support Zunum on aerostructures, had launched an effort that the participants acknowledged was intended to compete with Zunum's ZA10.

178. The Boeing participants overtly showed that they had used Zunum's trade secrets and confidential materials. The new plane bore hallmarks of Zunum's approach, including

1 targeting the same commuter market with the same novel propulsion system, with differentiation
2 limited to the use of a different quiet duct than the ZA10. The slides used showed extensive use
3 of Zunum's own calculations, design drawings, terminology, forecasts, economics, and aircraft
4 design. These slides even included cut-and-pasted verbatim text, tables, and graphics from the
5 Zunum material previously shared with Boeing.

6 179. Specifically, the Boeing attendees showed slides that included data and graphs
7 copied directly from the proprietary information-containing slides that Zunum had provided to
8 Boeing during the January 2017 design workshop and via the due diligence data room.

9 180. In particular, the BHE-11 design matched many of the ZA10 specifications that
10 Zunum had shared with Boeing, including specifications for maximum weight, usable load, cabin
11 pressurization, takeoff and landing distance, and other features.

12 181. The BHE team also copied Zunum's design and layout for integration of the
13 aircraft's turbogenerator unit in the aft section of the fuselage, and also copied a substantial
14 fraction of the high-voltage electricals.

15 182. Highly unusual for any propeller aircraft, the BHE-11 team chose to place its
16 propellers close by, almost flush with, the fuselage, exactly where the Zunum ZA10 positioned
17 its ducted fans.

18 183. The BHE-11 design also incorporated a series hybrid-electric propulsion system,
19 whereas Boeing's prior focus was on a parallel hybrid-electric architecture, and the industry had
20 been highly skeptical that a series hybrid design would be feasible or cost-effective for at least
21 several decades.

22 184. The BHE team also appeared to copy Zunum's proprietary process for modeling
23 and designing necessary components of the aircraft, such as how to optimize the aircraft's range
24 and generator size, as well as other features.

1 185. Boeing's description of its design also reflected Zunum's analysis in how to
2 reduce direct operating costs per passenger while extending the aircraft's range. The engineers
3 from BCA had been surprised that this was possible, and Zunum had to substantiate its analysis
4 to demonstrate to them that it was possible. Now, they were showing these same innovations on
5 Boeing's "own" aircraft.

6 186. The presentation that the BHE engineers made in the meeting on December 12,
7 2017, also included a direct copy of a Zunum graphic illustrating reduction in fuel burn and the
8 effect on direct operating costs, as well as another graphic analyzing operating costs.

9 187. The BHE-11 design that the BHE engineers presented also reflected Zunum's
10 unique approach to reducing space in the flight deck to accommodate another passenger seat.
11 This is a counterintuitive design because it is not permitted under the regulations that apply to
12 the types of aircraft Boeing typically designed, and even with a careful reading of the rules, this
13 configuration was highly innovative.

14 188. These are designs that were unique to the ZA10, otherwise unknown in the
15 industry, and that drove the economic metrics and other differentiating features that were the
16 foundation for the economic value proposition of the ZA10.

17 189. It became evident that the purpose of the meeting was to mine Zunum for even
18 more insights into how Boeing would have to improve upon its BHE-11 design to achieve the
19 results that Zunum had already achieved under the false pretense of helping Zunum by
20 addressing an alleged "overpromise" by Zunum on the economics and time to market.

21 190. At the workshop, it also became apparent that the undermining of Zunum within
22 Boeing, and potentially even Mr. Sinnett's public display of overt hostility, were the result of the
23 inability of this team to achieve the performance of the ZA10 with the BHE-11, and thus the
24 need to drag out the supposed due diligence and manipulate Zunum into providing additional
25 access to its remaining undisclosed technology breakthroughs.

1 191. Boeing's participants proceeded to explain that they were happy with their results
2 in that they showed successful general results, but they could not replicate the Zunum design's
3 actual results. This showed that Boeing found unexpected and unprecedented outcomes from
4 Zunum's approach, confirming that the design worked in ways that Boeing's senior engineers
5 had not believed possible. And it also demonstrated how Boeing, even with enormous resources,
6 had previously not been able to replicate the same extraordinary outcomes – only because there
7 were still many insights and trade secrets that Boeing had not yet extracted from Zunum on the
8 promise of aerostructures support, future financing, or a strategic relationship.

9 192. Zunum at this meeting realized that it was dealing with a company with an
10 internal team looking to drain Zunum of value, steal its technology, eliminate it as a competitor,
11 and usurp its first-mover advantage. The BHE engineers seemed to have no awareness of – or
12 if they had an awareness, no regard for – any contractual obligation, any duty to Zunum, or any
13 moral compunction about what became evident as an ongoing widespread dispersion of Zunum's
14 trade secrets within Boeing and its affiliates.

15 193. Moreover, now that it was clear that this team at Boeing was actually replicating
16 the Zunum business plan as announced by Mr. Sinnett to *Aviation Week* in August, it became
17 apparent that outreach by the BHE-11 team to engage Safran and others on the propulsion system
18 would have inevitably required Boeing's disclosure of Zunum's trade secrets to Safran and
19 others, because Boeing had no other independent design. An engine OEM would have needed
20 substantial detail about the design and specification in order to assess the feasibility and cost of
21 producing the propulsion system, all of which information would have been based on Zunum's
22 design. In light of this replica program, several prior requests by Boeing after closing of the
23 2017 investment became concerning in retrospect. These requests were ostensibly to assess
24 Zunum's aerostructures requirements but in hindsight appeared to have been to further Boeing's
25 internal program copied from and competing directly with Zunum's.

1 194. When Zunum learned that Boeing had replicated Zunum's proprietary aircraft
2 technologies, and instead of assessing the opportunity for aerostructures, was looking to
3 commercialize the aircraft with partners for the propulsion, it asked Mr. Jones about what Boeing
4 was doing. Mr. Jones confirmed that Boeing was indeed developing a separate hybrid-electric
5 aircraft and was seeking a partner to provide the propulsion system from the engine OEMs. An
6 associate at HorizonX also confirmed to Dr. Kumar that Safran had expressed confusion about
7 the Zunum and Boeing aircrafts, following similar confusion at UTAS.

8 195. However, Mr. Jones used his influence as a representative of Boeing to dissuade
9 Dr. Kumar from raising the issue further on the basis that this would disrupt Zunum's standing
10 at Boeing, just as personnel changes were being made to accelerate Boeing's engagement with
11 Zunum. The message from Mr. Jones was essentially that Boeing had acted inappropriately but
12 was remedying the situation, and Zunum should play along without objecting, lest it destroy its
13 chances of otherwise on-track funding and partnering.

14 196. Mr. Jones also spoke of the paranoid, entitled culture at BCA, drawn from its
15 "super duopoly" with Airbus, spilling over into actions against Zunum, which was viewed as
16 competing for "Boeing's markets." Mr. Jones also stated that Boeing also believed that Zunum
17 could not do aerostructures without Boeing. Mr. Jones's statements appeared to reflect a
18 personal compunction and concern regarding a dysfunctional and conflicted Boeing approach to
19 Zunum. Zunum relied on Mr. Jones's abiding claim that Boeing's senior executives continued
20 to support Zunum.

21 197. Confirming Boeing's false pretenses, Zunum never received any aerostructures
22 support, despite the specialized workshop with the BHE team. Mr. Knapp reached out to Dr.
23 Kunz in February 2018 to restart dialogue on aerostructures, while also launching outreach to
24 suppliers worldwide. A month later, he sent a formal Request for Information ("RFI") to Dr.
25 Kunz who routed the request to Boeing Research & Technology, which responded in May 2018

1 to say that it will not respond to the RFI but looked forward to the subsequent, more formal
2 Request for Proposals.

3 198. Shortly thereafter, in early 2018, Mr. Jones informed Zunum that Aurora Flight
4 Sciences Corporation (“Aurora”) had circulated a whitepaper within Boeing attacking the ZA10
5 as infeasible based on patently inaccurate specifications, a “straw-man” false model, although
6 Zunum lacked further detail regarding the contents of the report. The supposed concerns about
7 Zunum’s technology’s performance were belied by Boeing’s active and overt efforts to take the
8 technology itself, and falsely claim it as its own, including in the BHE-11 program which directly
9 competed with the ZA10.

10 **H. Boeing Further Reveals Its Misuse of Zunum’s Trade Secrets and Continues to**
11 **String Zunum Along**

12 199. HorizonX and Boeing used their repeated commitments to assist Zunum with in-
13 kind support and expertise and promises of investments and strategic partnership to repeatedly
14 string Zunum along with stop-and-start negotiations, keeping it captive and beholden to Boeing
15 and delaying and stifling its progress.

16 200. Despite the ongoing criticism of Zunum from within BCA and its apparent
17 attempt to copy Zunum’s design, Mr. Jones continued telling Zunum that it had the continuing
18 support of Boeing’s C-Suite executives, who sat directly on the HorizonX investment committee.

19 201. In early 2018, Zunum was preparing for a Series B fundraising round, targeting a
20 capital raise of \$80 to 90 million to resource its development plan for the next 18 months.

21 202. In January 2018, Zunum informed Mr. Jones that it planned to engage an
22 investment advisor to help with its fundraising for the Series B round.

23 203. Mr. Jones questioned the need for an investment advisor when Zunum had
24 support from Boeing to provide access to investors and increase Zunum’s valuation, on the basis
25

1 that Boeing would lead and anchor the financing round with a commitment of least 20% of the
2 funding raise, or \$16 million.

3 204. By February 2018, Zunum had made significant headway, obtaining expressions
4 of interest in investments from outside investors of up to \$61 million of the \$80 - \$90 million
5 that it was targeting to raise in the Series B round.

6 205. These expressions of interest included \$30 million from investors in Hong Kong,
7 who were proposing to enter into a China-focused joint venture with Zunum based in Zhejiang
8 province, where Boeing had a finishing center. The investors had approached Zunum over the
9 prior summer, and Mr. Jones had traveled with Dr. Kumar to Zhejiang Province for several days
10 earlier that month for meetings with investors and provincial officials. The President of Boeing
11 China also participated in the meetings and confirmed that the leaders negotiating with Zunum
12 had previously engaged with Boeing to lay the ground work for its finishing center. Mr. Jones
13 was eager for Boeing to partner with Zunum such that the joint venture was tripartite.

14 206. These expressions of interest also included \$15 million from SCV and UTAS.

15 207. Upon information and belief, HorizonX and Boeing did not want Zunum to obtain
16 such extensive funding from any third party or parties, which would make it less reliant on
17 Boeing, reduce Boeing's influence over Zunum, limit Boeing's ability to gain control of
18 Zunum's trade secrets, and delay or foreclose Zunum as a market entrant.

19 208. In January 2018, Mr. Jones and Mr. Nordlund approached Zunum and induced it
20 to pause its pursuit of investors in order to launch a strategic process with Boeing code-named
21 "Project Catalyst," later referred to as a "More Strategic Relationship" ("MSR"), which would
22 lead to Boeing becoming the sole investor in Zunum, while unlocking Boeing's aerostructures,
23 materials, and manufacturing expertise for Zunum. This was correlated with reassurances that
24 the BHE team was going to be controlled and overridden by the Boeing C-Suite's continuing
25 support for Zunum.

1 209. On February 13 and 14, 2018, Dr. Kumar, Mr. Knapp, and others from Zunum
2 met at HorizonX's facility in St. Louis, Missouri, with Mr. Nordlund, Mr. Jones, and others from
3 HorizonX to discuss Project Catalyst and the MSR, which HorizonX described as a joint venture.

4 210. HorizonX's proposed investments until this time had been capped at 20% because
5 an investment above that amount would require formal corporate approval from Boeing and
6 trigger regulatory reporting requirements. With Project Catalyst and the MSR, Horizon was
7 proposing a far more substantial investment that would go well beyond the 20% threshold.

8 211. At the meeting on February 13 and 14, 2018, Mr. Nordlund and Mr. Jones stated
9 that they were confident that Project Catalyst or the MSR would go forward, but they indicated
10 that it would likely take until June 2018 to close in light of the corporate approvals required.

11 212. By this time, Zunum had a runway of approximately 10 weeks of operating
12 expenses if it froze all new expenditures. In the meeting, Mr. Jones asked that Zunum continue
13 scaling to the targeted 2022 delivery of the ZA10, such that there was no loss of momentum
14 ahead of the MSR with Boeing, and such that Zunum would keep spending down its funds
15 rapidly. Dr. Kumar responded that this would not be possible without an immediate investment,
16 especially as HorizonX's proposal also required that Zunum cease its fundraising and decline the
17 interest in investments that it had cultivated and received.

18 213. Boeing gave Zunum confidence in this approach and induced its reliance on
19 Boeing by explaining that Boeing had followed a similar path with its acquisition in 2008 of a
20 drone manufacturer called Insitu. Several of the leaders at HorizonX, such as Mr. Nordlund and
21 Dr. Kunz, had joined Boeing through that acquisition, reflecting that it was a successful model
22 for working with Boeing.

23 214. Boeing also induced Zunum's reliance through ongoing reassurance by Mr. Jones
24 and a fast-paced schedule for additional due diligence and closing.
25

1 215. HorizonX targeted March 1, 2018, as a date to close funding on the additional
2 bridge financing, with additional due diligence for the MSR to be completed by April, and the
3 MSR with Boeing closing in May or June 2018.

4 216. Given that the proposal would expose Zunum financially, freezing its discussions
5 with other investors just at the point when Zunum was on the verge of running out of funds, Mr.
6 Nordlund and Mr. Jones offered Zunum a bridge loan to carry Zunum to June 2018. Dr. Kumar
7 made it clear that Zunum would need a cushion of a few months so as not to be out of funds in
8 the event of a delay in closing. Accordingly, Dr. Kumar told Mr. Nordlund and Mr. Jones that
9 Zunum would need at least \$10 million in the near term, and Mr. Nordlund responded that
10 “money was no object.” Mr. Nordlund and Mr. Jones indicated that a \$10 million bridge would
11 not be a problem and would be available within a few weeks.

12 217. On March 29, 2018, Mr. Jones confirmed that it was HorizonX’s “objective of
13 getting Zunum Aero the needed funding today (\$10M of capital within weeks) to relieve a near
14 term need . . . but doing it with an eye toward future investibility [sic] and in a way that’s
15 defendable within Boeing.”

16 218. During this period, in early 2018, Zunum had been developing relationships with
17 other well established aviation industry partners, such as Safran and UTAS, to create other
18 strategic options besides Boeing, given its prior experience with the BHE team. However, the
19 HorizonX proposal for Boeing to become a sole investor reset the scales, given that Boeing
20 would effectively be acquiring the trade secrets that it had misappropriated by foreseeably
21 acquiring Zunum, and given that the partnership would cement Boeing’s full support for Zunum.

22 219. As part of the due diligence for Boeing’s proposed MSR with Zunum, Mr. Jones
23 asked Zunum to host a review of its aircraft and propulsion program with 16 engineering leaders
24 from across Boeing units.
25

1 220. Specifically, Boeing sought to undertake an “enterprise technology assessment”
2 of Zunum in a meeting at Zunum’s facility in Kirkland, Washington, with engineers from BCA,
3 Aurora, and other Boeing programs. Dr. Kunz, who was organizing the meeting, acknowledged
4 that Zunum had previously briefed Boeing on much of the information sought.

5 221. On March 30, 2018, Christopher Kettering, a Chief Engineer for Aeromechanics
6 Technology in Boeing’s Research & Technology division, sent a proposed agenda for the
7 meeting. The express goal of the meeting was to “develop an enterprise agreed technology
8 assessment of the Zunum Aero Thin Haul concept assumptions and performance,” which was a
9 reference to Zunum’s initial focus on shorter, regional flights (short-haul).

10 222. The agenda also included a discussion of the “Zunum ideal vs. minimum variable
11 aircraft spectrum for the first/smaller aircraft,” as well as descriptions of several specifications
12 for gross sizing; requirements for range, speed, takeoff, time to climb, noise, and other criteria;
13 and assumptions upon which Zunum based its performance expectations for several components
14 of the mechanical and electrical systems, including batteries, turbines, generators, inverters,
15 motors, propulsors, powertrain, and propulsion.

16 223. In light of the scope of the information requested, and prior events, Dr. Kumar
17 specifically asked Dr. Kunz and Mr. Kettering to confirm how Zunum’s intellectual property
18 would be protected, and Mr. Kettering responded that it would be, but Dr. Kumar continued to
19 express his reservations about sharing data with this team in light of the apparent competitive
20 efforts by the supposedly-rogue BHE team, drawn from across BCA and HorizonX (which was
21 supposedly an error, being phased out).

22 224. The list of proposed attendees included Brian Yutko, who was Senior Vice
23 President of Programs at Aurora. Dr. Yutko and his team at Aurora had published the whitepaper
24 circulated within Boeing to undermine the ZA10 (using false attributes) and were themselves
25 developing urban electric air-taxis. Mr. Shumate, who had attended the January 2017 design

1 workshop and was subsequently involved in Boeing's BHE-11 program, was also scheduled to
2 attend. Dr. Kumar was concerned about the participation in the assessment by individuals who
3 were involved in Boeing's electric aircraft, given further risk created to Zunum's proprietary
4 information, and asked that they be excluded from the assessment.

5 225. On the investment, HorizonX proposed to include a valuation cap of \$40 million.
6 A valuation cap, especially in a bridge loan, generally impedes securing additional investments
7 because it sets a valuation benchmark and would require Zunum to justify an increase in the
8 valuation as part of a subsequent Series B investment round, if Project Catalyst and the MSR fell
9 through. For this reason, Zunum was unwilling to agree to a valuation cap.

10 226. On April 2, 2018, HorizonX's Investing Director, Michael Lohnert,
11 communicated that Boeing's investment would be reduced from the previously indicated
12 commitment of \$10 million to \$3 million and confirmed that the note would not include a
13 valuation cap, which he said was the most that it would invest without a valuation cap, although
14 HorizonX ultimately agreed to invest \$4 million. This unilateral imposition by Boeing
15 constrained Zunum's fundraising flexibility greatly and significantly reduced Zunum's runway
16 and any cushion of time to close on the MSR, and provided Boeing and HorizonX with
17 significantly greater negotiating leverage in the event that they had a genuine intent to follow
18 through on the MSR, or push Zunum to the brink of financial distress if they were not to follow
19 through with the MSR. It turns out that the latter was Boeing's actual strategic intent.

20 227. On April 4, 2018, in preparation for the ostensible due diligence meeting, Dr.
21 Kunz circulated a "common data worksheet" to enable the systematic resolution of technical
22 issues that were raised. The spreadsheet included a tab in which the Boeing team developing the
23 BHE-11 documented insights gained from the December 12, 2017, workshop with Zunum.

24 228. In particular, this tab documented how Boeing could advance the BHE-11 to
25 achieve the superior performance of the ZA10. This was derived from the information that Mr.

1 Jones had insisted that Zunum provide the team developing the BHE-11, supposedly to quell
2 their undermining of Zunum to Boeing's leadership and prevent erosion of Boeing's continuing
3 support for Zunum.

4 229. The comments and notes by the BHE team in the spreadsheet reflected active
5 competition with Zunum's aircraft and an ongoing attempt to use Zunum's design and analysis
6 to further Boeing's directly competitive BHE-11 program. The comments also confirmed the
7 strategic value of Zunum's ZA10.

8 230. For example, Dr. Bradley commented that BCA would do a side-by-side
9 comparison of the two systems' power loads and thermals. He noted that the BHE-11 had "a lot
10 more load" than the ZA10, which translated into the BHE-11 system having less efficiency than
11 the ZA10. Dr. Bradley was apparently seeking a way to achieve Zunum's results with the BHE-
12 11. Dr. Bradley and others were also very intrigued by Zunum's superior engine and aircraft
13 maintenance factors, including novel operations of the range extender to achieve these superior
14 features, and sought to achieve these results with the BHE-11.

15 231. Dr. Bradley's comments also reflected his intent to obtain further data from
16 Zunum about the ZA10's propulsion and maintenance achievements to further Boeing's attempt
17 to achieve similar results with the BHE-11. Others demonstrated a similar intent to extract
18 further proprietary information from Zunum immediately after misusing the workshop to do so.
19 Notably, the workshop came about purely as a result of their misuse of information derived from
20 the prior funding due diligence, repurposed to launch the BHE-11 program.

21 232. Dr. Kumar immediately brought the spreadsheet to Mr. Jones's attention and
22 asked that two of the scheduled attendees be disinvited from the due diligence review as a
23 reasonable means to ensure against any misuse of Zunum's intellectual property, proprietary
24 information, or trade secrets in Boeing's attempt to compete with Zunum.

1 233. Dr. Kumar specifically requested that Mr. Shumate be excluded from the meeting,
2 given his involvement with the BHE-11 program, and that Dr. Yutko from Aurora be excluded,
3 given Aurora's work on an electric urban air taxi.

4 234. Dr. Bradley had not been listed as a proposed attendee in the e-mails to Zunum.
5 Dr. Kumar also sought input from Mr. Jones as to other Boeing personnel who should be
6 excluded from the meeting in light of any involvement in Boeing's competing programs, given
7 Zunum's lack of visibility into competitive efforts by other units at Boeing.

8 235. Mr. Jones reaffirmed the need for Zunum to disclose additional information,
9 allegedly to satisfy HorizonX's and Boeing's ongoing due diligence, but acknowledged Zunum's
10 desire and need to protect its intellectual property, trade secrets, and other proprietary
11 information. Mr. Jones reassured Zunum that the information was really part of investment due
12 diligence, was not for Boeing's competitive effort, and that Zunum should trust Boeing and focus
13 on the broader value of steady funding and an ultimate acquisition, which would be enhanced
14 once the skeptics were assured that the Zunum ZA10 really could deliver the performance that
15 Zunum said it could. He characterized the BHE-11 efforts as a program that would show the
16 innovation and value of Zunum's proprietary technology, which was fully protected. This was
17 Boeing's ongoing cover story for its ongoing espionage of Zunum's trade secrets and intellectual
18 property.

19 236. On April 5, 2018, Mr. Jones told Dr. Kumar that the internal discussions about
20 the MSR at HorizonX "revolve[d] around [their] understanding of the technical plan," and he
21 proposed a meeting within two weeks to discuss the MSR. Boeing and HorizonX were
22 considering how best to structure the relationship contemplated by the MSR.

23 237. However, after Dr. Kumar raised his concern that certain BCA and Aurora
24 personnel, which were participating in Boeing's due diligence, were also actively involved in
25 developing the BHE-11 that was competing directly against Zunum with the benefit of Zunum's

1 trade secrets learned through the due diligence process, HorizonX and Boeing abruptly reversed
2 course.

3 238. Upon information and belief, HorizonX and Boeing used Zunum's umbrage at
4 their misuse of Zunum's intellectual property, trade secrets, and other proprietary information as
5 a pretext to delay the bridge financing and postpone the MSR. Mr. Jones elevated the concerns
6 that Dr. Kumar had raised to Boeing's legal department and postponed the due diligence meeting.

7 239. On April 10, 2018, Mr. Jones expressed that there were some unspecified
8 "concerns" about the bridge financing. He nevertheless reiterated that "our position is to
9 complete the bridge asap," but indicated that Zunum would need to "raise money on the market"
10 and reflected an understanding that abandonment by Boeing would send a negative signal to the
11 market that would be "detrimental to Zunum."

12 240. Boeing did not ultimately conduct this additional due diligence, in hindsight
13 reflecting that it had no sincere interest, and that the exercise was part of an ongoing, systematic
14 effort to misappropriate additional trade secrets.

15 241. Thus, despite initially taking steps to follow through on HorizonX's and Boeing's
16 leadership of an investment round, such as with Justin O'Brien's outline of a plan and messaging
17 in mid-2017, and after inducing Zunum to abandon the external fundraising as a precondition to
18 pursuing a joint venture with Boeing, Mr. Jones told Dr. Kumar on April 10, 2018, that the MSR
19 with Boeing was no longer feasible within the timing that Boeing and HorizonX had proposed
20 and that Zunum therefore expected. He strongly encouraged Dr. Kumar to renew Zunum's
21 external fundraising efforts without near-term reliance on a more formal partnership with
22 Boeing.

23 **I. Boeing's 2018 Bridge Investment**

24 242. Zunum's operating funds had nearly been depleted by February 2018, and Mr.
25 Nordlund and Mr. Jones had induced Zunum to continue ramping up its development in

1 anticipation of a \$10 million bridge loan and eventual MSR or acquisition. As a result, Zunum
2 was in desperate need of funding when Boeing reduced the proposed bridge financing from \$10
3 million to \$4 million in April 2018.

4 243. After Boeing reneged on its offer of a \$10 million bridge financing, Boeing and
5 HorizonX closed on a bridge investment of only \$4 million in Zunum in May 2018, and JetBlue
6 Technology Ventures joined the bridge with an additional \$2 million.

7 244. Zunum was in desperate need for continued investment after being induced by
8 Boeing to abandon the \$61 million in expression of interest from outside investors that it had
9 secured on its own. Boeing's \$4 million bridge financing was not enough, and Zunum would
10 also need continued support from Boeing as its lead investor and strategic investor to obtain
11 additional outside investments. If Boeing and Zunum suddenly parted ways, it would signal a
12 lack of confidence in Zunum's designs and technology to suppliers, customers, and most
13 importantly at this time, investors. In fact, interested investors frequently asked about Boeing's
14 support including its commitment to continued financial support of Zunum, which was material
15 to investors considering investments in Zunum.

16 245. During this time, Zunum was also heavily engaged in due diligence with SCV
17 and other business units of Safran, which were also looking to Boeing – the main customer of
18 several Safran business units – to signal Boeing's support for an investment in Zunum. Zunum
19 was also engaging UTAS with respect to working with Zunum to allow testing in UTAS's
20 megawatt-scale testing facility for electrical systems, which was the only such system known to
21 Zunum. Zunum was unable to find an alternative even through NASA or the National Renewable
22 Energy Laboratories.

23 246. Zunum gave HorizonX a Convertible Promissory Note for \$4 million, and Zunum
24 and HorizonX executed a Note Purchase Agreement, effective as of May 1, 2018.

25 247. They also executed a new Investor Rights Letter (the "2018 IRL").

1 248. In addition, Boeing transferred all of its rights and interests in the 2017
2 Convertible Promissory Note, Note Purchase Agreement, and 2017 IRL to HorizonX, pursuant
3 to a Transfer Agreement.

4 249. The Transfer Agreement expressly confirmed that Boeing “agree[d] to continue
5 to be bound by Section 5 of the [2017 IRL] with respect to all Confidential Information (as
6 defined in the [2017 IRL]) disclosed to [Boeing] through the date of this Agreement”
7 Transfer Agreement § 1.

8 250. Following execution of the 2018 investment, HorizonX and Boeing, through Mr.
9 Jones and others, continued to string Zunum along with the prospect of establishing a joint
10 venture and providing in-kind support.

11 251. For example, on May 1, 2018, after closing on the smaller \$4 million investment,
12 Mr. Lohnert congratulated Dr. Kumar on the current financing and wrote in an e-mail, “Next
13 step is the MSR.”

14 252. In a meeting at HorizonX’s office on June 5, 2018, Mr. Jones confirmed to Dr.
15 Kumar that HorizonX “had funds to work with Zunum.”

16 253. In June and July 2018, Mr. Jones continued to discuss the path forward to an MSR
17 with Zunum. He also indicated that he would help to facilitate support and expertise from Boeing
18 on materials, manufacturing, and Zunum’s efforts to seek partnerships in China and India, but
19 he did not follow through.

20 254. For example, on July 26, 2018, Mr. Jones told Dr. Kumar that HorizonX had
21 received approval for a materials and manufacturing team from Boeing to help work on Zunum’s
22 aircraft. Mr. Jones had supposedly operated on Zunum’s behalf to obtain this approval.

23 255. Meanwhile, however, in July 2018, Boeing created the Boeing NeXt division
24 focusing on integrated door-to-door and electric vertical lift-off aircraft using proprietary
25 information obtained from Zunum through Boeing’s and HorizonX’s prior due diligence.

1 256. Boeing NeXt was led by Mr. Nordlund, as well as Per Beith, who became Chief
2 Executive Officer of Aurora in July 2019. Aurora's outgoing founder and Chief Executive
3 Officer left to found Electra.aero, another competitor to Zunum, in March 2020.

4 257. Boeing NeXt was formed to launch next-generation Boeing businesses, and
5 numerous personnel involved with Boeing NeXt had been involved in reviewing Zunum's
6 platform.

7 258. Now, Electra.aero advertises its aircraft with "distributed electric propulsion" to
8 reduce cost, emissions, and noise, as well as "on-demand service" to allow "seamless integration
9 into ground mobility services," which describes the multi-modal transportation system that
10 Zunum disclosed to Dr. Bradley, Mr. Langford, Edward Lovelace, Ph.D., as well as Dr. Yutko
11 and others who worked for Mr. Langford at Aurora. Drs. Yutko and Lovelace also traveled to
12 the Zunum center in Washington for the "Zunum IP assessment," extracting information on a
13 wide range of aircraft and propulsion technologies from Zunum engineering leadership, and Dr.
14 Lovelace, who was a Senior Technical Fellow at Aurora, subsequently visited the Zunum
15 Electric Power Center in Illinois, ostensibly as a precursor to Boeing contracting work to Zunum,
16 thus inspecting Zunum's world-leading 500 kW hybrid propulsion system in its final fabrication
17 and test phase of development.

18 259. The Electra.aero aircraft under development is probably not coincidentally
19 targeting the short-haul and integrated door-to-door travel markets that the ZA10 was designed
20 to serve and, therefore, likely builds on extensive market and economic studies that Zunum
21 provided to Boeing during the financing due diligence prior to the 2017 investment, and as part
22 of due diligence in support of the MSR. These were also provided to Dr. Yutko, along with 15
23 other Boeing Vice Presidents, in a confidential whitepaper by Zunum on the future of short-haul
24 air travel, as background reading ahead of a review to support "Project Catalyst."
25

1 260. Moreover, several of these individuals had broad exposure to Zunum's hybrid-to-
2 electric aircraft and propulsion technologies and their application to aircraft from air-taxis to
3 large aircraft while (supposedly) performing financing due diligence on Zunum prior to the 2017
4 investment, while engaged in the Boeing BHE-11 program, while reviewing Zunum for an MSR,
5 and while assessing Zunum.

6 261. Given the nature of Zunum's hybrid-to-electric architecture, these technologies
7 expressly enabled hybrid-electric aircraft and all-electric aircraft and carried over to
8 Electra.aero's electric designs. Aurora circulated a whitepaper within Boeing that undermined
9 confidence in Zunum, and Zunum was recently informed that Aurora leaders have openly
10 discussed their subsequent success in capturing funds that Boeing had committed to invest in the
11 Zunum ZA10 program.

12 262. During this time, Zunum also sought to renew its discussions with its Hong Kong
13 investor, SCV, and UTAS, who had all previously expressed interest in investing, but these
14 discussions had been tabled due to HorizonX's proposal of the MSR. Mr. Jones proposed that
15 Boeing help by including a Zunum-Boeing joint venture focused on China in Boeing's 2020
16 strategic plan for that critical Boeing market. Accordingly, he engaged Mr. Fernandes, who had
17 transferred from HorizonX to a role at Boeing International, on this initiative, but it did not come
18 to fruition.

19 263. On August 9, 2018, Mr. Jones reported to Dr. Kumar that HorizonX and Boeing
20 may be able to leverage Boeing's relationship with Safran to obtain an investment.

21 **J. Zunum's Engagement with Safran and UTAS**

22 264. After stringing Zunum along between February 2018 and August 2018 with the
23 prospect of an MSR which never materialized, an interim bridge financing of \$10 million which
24 was reduced to \$4 million as well as promises of in-kind support that never materialized, Boeing
25 and HorizonX interfered with and ultimately undermined Zunum's ability to obtain investments

1 from two of Boeing's main suppliers – Safran and UTAS – at a time when the funds from the
2 May 2018 bridge from HorizonX were almost exhausted.

3 265. It is no coincidence that Safran, a major supplier of electrical systems equipment
4 to Boeing and a competitor of Zunum, which had engaged with Boeing – again without Zunum's
5 knowledge or consent – to develop its own hybrid-electric propulsion system for its replica
6 aircraft program, began proposing an investment in Zunum. UTAS, a primary supplier of
7 electrical systems for Boeing's larger aircraft, followed the same pattern as Boeing and then
8 Safran.

9 266. Boeing wields tremendous influence over Safran because Boeing is one of the
10 largest customers for its SEP division. At the same time that SCV, Safran's investment fund,
11 independently approached Zunum with a proposal to invest and co-lead a Series B fundraising
12 round with Boeing, Boeing was actively soliciting SEP to develop a hybrid-electric propulsion
13 system competing with Zunum and based on Zunum's design, which SEP had received from
14 Boeing.

15 267. SCV followed the same bait-and-switch pattern as Boeing had, in a parallel
16 fashion, later revealing that Boeing had combined with Safran and its business units to pursue
17 the market opportunity for hybrid-electric and all-electric aircraft that Zunum had identified,
18 while excluding Zunum, to attempt to usurp Zunum's first-mover advantage by delaying or
19 foreclosing Zunum's entry into the market.

20 268. On May 10, 2017, Nicolas Franck, an Investment Manager at SCV, had contacted
21 Dr. Kumar with interest in investing in and partnering with Zunum. Zunum and Safran entered
22 into a non-disclosure agreement on August 18, 2017, to protect information exchanged between
23 Zunum and Safran, and its affiliates, during the course of Safran's consideration of an investment
24 in, and partnership with Zunum.

1 269. In September 2017, Zunum also approached SHE and UTAS with an RFI seeking
2 information on a turboshaft tailored to Zunum's targeted power output as a component of
3 Zunum's hybrid-electric propulsion system. Zunum marked its RFI response as confidential and
4 proprietary. Consistent with its practice of minimizing disclosure, Zunum limited the
5 specifications identified in the RFI to those necessary for a proposal on the turboshaft.

6 270. Dr. Kumar informed Mr. Jones and Mr. Fernandes of this RFI.

7 271. On September 29, 2017, SCV confirmed its interest in collaborating with Zunum
8 and confirmed the prevailing view across the aerospace industry, including in Europe, that
9 electric-powered aircraft was "quite far down the road," but noted that SCV was interested to
10 learn more about the market opportunities that Zunum was pursuing.

11 272. Dr. Kumar responded to note that Zunum would need to be careful with such
12 information given Safran's uncertain role as a collaborator or competitor. Safran's Vice
13 President of Corporate Strategy assured Dr. Kumar that they would "find common ground."

14 273. In October 2017, leaders from Safran and SCV traveled to Kirkland, Washington
15 to meet with Zunum at its facility to explore a collaboration.

16 274. In November 2017, a team of engineers from SHE and SEP traveled to Zunum's
17 Electric Power Center in Illinois for workshops as part of their due diligence to support the
18 proposed investment in Zunum and to explore a collaboration such as by SHE supplying the
19 turboshaft for Zunum's hybrid-electric propulsion system with a paired generator from SEP.

20 275. On November 28, 2017, following a meeting and workshop between Zunum and
21 Safran in Paris, the Vice President of Safran Research & Technology ("SRT") told Dr. Kumar,
22 "[i]n the field of electrical flight, we see a lot of projects . . . but not so many having a realistic
23 ambition, based on a sounded approach of the need, and a clever choice of the tryptic [sic]
24 'capacity / speed / range' which is key to face such a challenge." (ellipses in original).

1 276. Safran, a leading supplier of electrical systems and propulsion systems for
2 aircraft, validated the merit of Zunum's approach.

3 277. In light of the hostility and criticism toward Zunum from the BHE-11 team that
4 had recently been surfaced by Mr. Jones at this time, Dr. Kumar was concerned that BCA would
5 tarnish Zunum's developing goodwill and relationship with Safran. However, he was unaware
6 that Boeing was already combining with Safran using its BHE-11 replica hybrid aircraft to
7 displace Zunum and corner the emerging hybrid-electric and all-electric airplane market for
8 itself.

9 278. On December 22, 2017, SCV issued a letter of interest to invest a minimum of \$5
10 million subject to further due diligence of Zunum's market analysis and aircraft model. This
11 letter reflected the preliminary approval by Safran's leadership to invest following a presentation
12 by Dr. Kumar to Safran's executive committee, including Safran's Chief Executive Officer.
13 However, further discussions were postponed almost immediately when HorizonX proposed to
14 be Zunum's sole investor in February 2018.

15 279. When Zunum renewed those conversations with Safran in May 2018, SCV
16 indicated that its investment would be contingent on Zunum entering into development
17 agreements with the Safran Group's business units. SCV also met with the leaders at HorizonX
18 managing Boeing's investment in Zunum, supposedly to discuss how SCV and HorizonX would
19 collaborate on an investment in Zunum.

20 280. Meanwhile, given the disruptive nature of its technologies, Zunum asserted that
21 the development agreements were conditional on Safran joining Zunum's Board of Directors as
22 an investor, to deflect competitive conflict, as Safran would then have fiduciary obligations to
23 Zunum.

1 281. One of the gating factors of SCV's investment in Zunum was evidence of support
2 for the investment by Boeing, which reflected validation of Zunum's technology and plans, but
3 which was also necessary in light of Safran's general dependence on, and deference to, Boeing.

4 282. In March 2018, Zunum expanded development discussions with SEP to several
5 components of the hybrid-to-electric propulsion. In May 2018 Zunum opened a due diligence
6 secure electronic data room for SCV with extensive proprietary materials, aligning on a roadmap
7 to close the investment ahead of the start of the summer holidays in France on July 14, 2018.

8 283. Meanwhile SCV and Zunum closed co-development contracts to cement the
9 partnership. SCV engaged several additional business units to participate in developing systems
10 for the ZA10.

11 284. These Safran affiliates, including Safran Landing Systems, Safran Nacelles,
12 Safran Cabin, and SEP, coordinated through a program management office overseen by leaders
13 from SCV and SHE, dovetailing with the investment due diligence and the closing of a long-
14 term contract for SHE's production of a turboshaft to serve as a range extender on the ZA10
15 aircraft.

16 285. In August 2018, Mr. Jones expressed to Dr. Kumar that HorizonX was
17 investigating how best to support Zunum's fundraising efforts and acknowledged that time was
18 of the essence. Mr. Jones suggested that Boeing could leverage its relationship with Safran.

19 286. Approximately one week later, on August 15, 2018, JetBlue Technology
20 Ventures' Board Observer on the Zunum Board of Directors asked Mr. Jones what Boeing could
21 do to help secure Safran's investment in Zunum. Mr. Jones confirmed that Boeing has "the right
22 relationships to call the right people to be influential."

23 287. However, in August 2018, HorizonX and Boeing reneged on the concept of an
24 MSR and investment at a level greater than 20%, and reduced their offer to maintain an
25 approximately 20% *pro rata* investment stake in Zunum. This equated to a maximum of \$10

1 million of the \$50 million fundraising round that Zunum was targeting at that time, thereby
2 delaying the entry of service of the ZA10 aircraft to 2023, given Boeing's prior repeated stringing
3 along of Zunum on the MSR.

4 288. HorizonX and Boeing knew that Zunum's need for additional funding was
5 increasing in urgency, given that Zunum had not received the bridge financing of \$10 million
6 that HorizonX had previously proposed in February 2018, and HorizonX had subsequently
7 scaled this down to only \$4 million. Boeing also knew that Zunum was counting on a \$5 million
8 investment from SCV to serve as a springboard to additional fundraising.

9 289. On September 11, 2018, Zunum entered into the Contract 2018 - 09 for the
10 Design, Development, Manufacture, Supply, and Support of the Ardiden 3Z Engine for the ZA10
11 Commuter Aircraft between Safran Helicopter Engines and Zunum Aero for production of the
12 turboshaft component of the hybrid-electric propulsion system for the ZA10, which SCV
13 required as a condition for its investment in Zunum.

14 290. Simultaneously, the investment committee for SCV reviewed the assessment of
15 the ZA10 aircraft by SRT, and on that basis gave approval for the investment to proceed, clearing
16 the final condition for the investment. Dr. Kumar also presented to the presidents of Safran's
17 business units in a "Grand Oral" on September 19, 2018.

18 291. Shortly thereafter, Zunum and Safran executed a broad co-development
19 agreement with several Safran business units, which SCV also required as a condition for its
20 investment in Zunum.

21 292. Zunum engaged with SCV and SRT on the assessment, and Zunum provided
22 additional proprietary information to show that SCV and SRT had underestimated the energy
23 density of state-of-the-art battery packs by 50%, while also overestimating the operating costs of
24 the ZA10 by 40%, further improving the business case for the aircraft over what had been
25 presented to the SCV Investment Committee for approval.

1 293. Dr. Kumar had repeatedly asked Mr. Jones to follow through on his prior
2 commitment to have Boeing leaders “call the right people to be influential” at Safran. SCV and
3 SHE had emphasized to Zunum that it was critical for key Safran leaders to be contacted by their
4 counterparts at Boeing to confirm Boeing’s support for Safran’s investment in Zunum. They
5 provided names of the key Safran business unit Presidents to Dr. Kumar, who then sent them to
6 Mr. Jones, who then confirmed that the outreach would occur.

7 294. However, on September 28, 2018, Mr. Jones informed Dr. Kumar that SCV had
8 expressed reservations about investing in Zunum due to mixed messages from Boeing regarding
9 its support for the investment. Dr. Kumar again reminded Mr. Jones that it was critical for
10 Boeing leaders to contact their Safran counterparts to demonstrate Boeing’s promised support
11 for Zunum.

12 295. On October 22, 2018, a contingent from SCV traveled from France to Zunum’s
13 office in Bothell, Washington. The SCV contingent had traveled to Washington to close the \$15
14 million SCV and HorizonX investment in Zunum’s Series B financing round. Accordingly,
15 Brian Schettler, Managing Director for HorizonX, had arranged to fly in that day for the closing,
16 but cancelled at the last minute and asked Mr. Lohnert to join instead. Zunum was also hosting
17 two other overseas investors that week, who had planned to join the financing following the
18 closing by SCV and HorizonX.

19 296. Just prior to the meeting, and to the surprise of the SCV contingent who had
20 traveled from France to close on the investment, the SCV contingent was informed that it was
21 no longer authorized to complete a closing with Zunum, and that the investment no longer had
22 the support of the Safran Presidents.

23 297. HorizonX, in turn, used the reversal by SCV as a basis to withdraw its own
24 support for co-leading the Series B financing.
25

1 298. Dr. Kumar contacted Mr. Jones to urge him to fulfill his commitment for Boeing
2 to endorse Zunum to Safran leaders and to reconcile mixed messages from Boeing, but he
3 declined, noting that the considerable influence Boeing had over Safran resided at BCA, not with
4 HorizonX. Mr. Knapp had separately been informed by Safran that, contrary to Mr. Jones'
5 repeated assurances, no decision-maker at Safran received any message of support for Zunum
6 from Boeing leadership, and this silence was viewed as a sign of Boeing's lack of support for
7 Zunum.

8 299. In December 2018, an Executive Vice President at SHE visited Zunum's office
9 in Bothell, Washington when he was in Seattle for a meeting with Boeing. He told Dr. Kumar
10 and Mr. Knapp that Alain Sauret, president of SEP, had blocked the investment. He also noted
11 that Mr. Sauret's business unit was beholden to BCA. The SHE Executive Vice President also
12 informed Dr. Kumar and Mr. Knapp that Mr. Sauret would not have objected to the investment
13 without BCA's influence. SEP would also be the business unit primarily involved in working
14 with Boeing on its hybrid-electric propulsion system.

15 300. Dr. Kumar and Mr. Knapp were informed that Mr. Sauret's key lieutenant was
16 visiting Boeing concurrently to further their joint hybrid-electric program. The SHE Executive
17 Vice President also informed them that Stephane Cueille, president of SRT, and a close friend
18 of Mr. Sauret, had joined him in the reversal on SCV's investment decision, even though his
19 business unit had participated in the prior decision by the SCV Investment Committee to proceed.
20 Moreover, Zunum had since demonstrated to SCV and SRT that they had far underestimated the
21 economics and range of the ZA10 in the analysis that was presented to the SCV Investment
22 Committee.

23 301. Curiously, Safran appeared to act against its own interests by reversing its
24 decision on its modest \$5 million investment in Zunum, which jeopardized up to \$20 billion in
25 revenues to SHE over the life of the turboshaft contract, and more, given the broad co-

1 development agreement between Zunum and several Safran business units, executed just the
2 month prior. Zunum had repeatedly asserted to Safran that the agreements were conditional on
3 Safran investing in Zunum and joining its Board of Directors., Safran reversed its investment
4 decision knowing that doing so would immediately jeopardize that vast opportunity.

5 302. Even 13D Global Strategy & Research, in its November 2018 newsletter,
6 recognized that the turboshaft agreement with Zunum brought significant value to Safran.
7 Noting that Safran “makes engine turbines for hybrid electric aviation startup Zunum,” the
8 newsletter included the Safran stock as a potential candidate for “an aviation transformation
9 portfolio.”

10 303. However, in March 2019, within months of the reversal of Safran’s decision to
11 invest in Zunum, the Chief Executive Officer of SHE, Franck Saudo, announced at the Heli-
12 Expo helicopter tradeshow Safran’s ambition to become a market leader in Hybrid-Electric
13 Propulsion Systems (“HEPS”) by 2025, based on a close collaboration among SEP, SHE, and
14 Safran Power Units.

15 304. Safran Power Units is a supplier of auxiliary power units (“APUs”) for aircraft
16 and a division of SEP. Eric Dalbies, the Executive Vice President responsible for SCV, was
17 appointed to lead Safran Power Units in November 2018, concurrent with Safran’s and Boeing’s
18 about-face on investing in Zunum.

19 305. In November 2018, Boeing and Safran also deepened their close partnership by
20 forming a 50-50 joint venture (subsequently named Initium Aerospace) to develop APUs,
21 expanding the product line of Safran Power Units to challenge Honeywell’s leadership of that
22 market.

23 306. Boeing and Safran went further in September 2019 when HorizonX and SCV co-
24 invested in EPS, a developer of advanced batteries for aviation. A press release announcing the
25 investment featured Mr. Schettler, Managing Director of HorizonX, illustrating Boeing’s

1 combination and collusion with Safran to usurp Zunum's first-mover advantage in the hybrid-
2 electric and all-electric propulsion aircraft market, even though this entailed tremendous damage
3 to Zunum, which was HorizonX's first investment. Mr. Sauret is quoted in the same press release
4 stating, "Safran will collaborate with EPS to offer our customers electric or hybrid-electric
5 propulsion systems with a level of performance that sets us apart from competition." He further
6 claimed that "Safran is already at the cutting edge of this field"

7 307. Safran had previously rejected hybrid propulsion as unviable before the 2040s,
8 but it had learned about the pathway to near-term hybrid-electric propulsion for aircraft from
9 exposure to Zunum's trade secrets from Boeing, and from Zunum as part of Safran's due
10 diligence on Zunum. Safran and Boeing colluded and combined to use Zunum's proprietary
11 information to compete against Zunum in order to foreclose Zunum from the very markets that
12 Zunum had innovated, identified, and developed.

13 308. In fact, contrary to Mr. Saudo's and Mr. Sauret's assertions to the media in March
14 and September 2019, respectively, it was Zunum and not Safran that was at the cutting-edge of
15 the field. SEP and SHE leaders in the Safran contingent who visited Zunum for the purported
16 closing complimented Zunum on the sophistication of the development activities at the Zunum
17 Electric Power Center in Illinois, noting that these "could be Safran."

18 309. Mr. Sauret's current claim of Safran being at the "cutting edge" of the field are
19 both false and true in some measure. They are belied by the modest power levels and
20 performance of the products unveiled so far, which still fail to meet the capability of the models
21 that they improperly copied. Although SEP has announced the intent to develop electric motors
22 of power levels of up to 500 kW, aligned with Zunum's P0 prototype motor awaiting test in late-
23 2018, the only motors announced by SEP are rated up to 50 kW at a power density of 2.5 kW
24 per kg. The latter is a key metric given low weight is essential for flight. Meanwhile, the Zunum
25 P0 motor is rated at 500 kW at 7 kW per kg, nearly three times lighter per kW of power, and on

1 track to 10 kW per kg, four times lighter per kW of power, when integrated with Zunum's Quiet
2 Electric Propulsion units. However, to the degree that SEP has jumped forward based on its
3 copied approach, it is leading the market among incumbent OEMs.

4 310. Moreover, Safran's conduct has effectively placed it ahead of Zunum by improper
5 copying and corporate interference. Zunum was on track to start flight testing of its 500 kW
6 hybrid electric propulsion system, an important milestone, in May 2019 when Boeing's and
7 Safran's abrupt reversal in October 2018 drove Zunum into a financial tailspin. The record of
8 financing transactions by other electrified vehicle ventures would suggest that the successful
9 achievement of that milestone would have multiplied the value of Zunum many times over, thus
10 placing it out of reach of Boeing or Safran. This interference with Zunum at a vulnerable stage
11 effectively stifled Zunum from reaching this critical milestone, thereby completing an
12 anticompetitive move, and allowing a slower-moving, less-adept incumbent (Safran) to plod
13 forward and still be the current leader among incumbent OEMs.

14 311. Based on information and belief, Boeing also interfered with a proposed
15 investment from UTAS during this time.

16 312. Discussions on a partnership between UTAS and Zunum were initiated when the
17 President of UTAS approached Dr. Said to propose collaborating on hybrid propulsion in June
18 2017. UTAS then followed up with Dr. Said in October 2017 by proposing that UTAS invest in
19 Zunum.

20 313. Accordingly, in November 2017, a corporate development team from UTAS
21 engaged with Zunum to launch due diligence and lay the groundwork for an investment, while a
22 business development team engaged to flush out what developed into eight areas of collaboration
23 over the following months. These activities were code-named "Project Hummingbird" within
24 UTAS, alluding to Zunum, which is taken from the Mayan word for hummingbird.

1 314. To support these activities, Zunum provided UTAS an extensive due diligence
2 data room comparable to what it had built to support due diligence by Boeing. Zunum also
3 provided technical details around the planned areas of collaboration and launched negotiations
4 regarding contractual and intellectual property frameworks. Zunum's technical leader also
5 engaged in workshops with UTAS's technical staff to help them understand the Zunum hybrid-
6 to-electric technologies, and the targeted requirements, all under the protection of a non-
7 disclosure agreement.

8 315. In March 2018, Zunum and UTAS continued to discuss a partnership.

9 316. UTAS proposed joining Boeing and JetBlue Technology Ventures in the bridge
10 to a Series B investment round with a \$10 million investment by UTAS in Zunum. For a period
11 in April 2018, Michael Groenhout, who had been Executive Director of Corporate Strategy and
12 Corporate Development for UTAS, even proposed UTAS becoming Zunum's sole investor, just
13 as Boeing had done in February 2018.

14 317. UTAS sought to close the investment that it had offered by July 2018 so as to
15 announce its investment in, and partnership with, Zunum at the Farnborough International
16 Airshow, a widely-attended trade fair for the aerospace industry. This included the parties
17 negotiating a convertible note agreement in June 2018 and discussing coordination between their
18 marketing teams.

19 318. In late July 2018, UTAS abruptly abandoned its investment proposal stating that
20 it was not prepared to invest in an aircraft manufacturer. Zunum later learned through
21 HorizonX's Board Observer that the Chief Technology Officer for UTAS had approached the
22 Chief Technology Officer at Boeing, who sat on HorizonX's investment committee overseeing
23 its investment in Zunum, to propose that Boeing and United Technologies partner to develop
24 hybrid aircraft.

1 319. Upon information and belief, Boeing actively interfered with the proposed
2 investment by UTAS. As with SEP, UTAS was beholden to Boeing and susceptible to Boeing's
3 substantial influence based on their dominant position in the aircraft industry. In addition, in
4 July 2018, Mr. Jones advised Zunum to trust Safran over UTAS.

5 320. However, before its sudden shift, UTAS had been urging Zunum to close on a
6 strategic partnership quickly, for an announcement just a few weeks prior at Farnborough, and
7 had even proposed placing UTAS staff at Zunum's Electric Power Center in Illinois to team with
8 Zunum in a lean cross-functional development environment.

9 321. Through 2017, UTAS was also a leading skeptic of electrified propulsion for
10 aircraft. In a wide variety of venues, UTAS leaders noted that electrification was at best a
11 solution for the distant future, requiring "three technological miracles," which was "two-and-a-
12 half too many," for a sector such as aviation.

13 322. As with Safran, UTAS's attitude toward the viability of hybrid aircraft
14 dramatically changed after it engaged with Zunum, and UTAS suddenly announced extensive
15 investment into hybrid-electric propulsion following its obtaining access to Zunum's intellectual
16 property, trade secrets, and proprietary information.

17 **K. Impact of Boeing's Serial Withdrawals from Forthcoming Investments**

18 323. Boeing's pattern of dangling investments and partnership only to renege at the
19 last minute, and assuring Zunum of its continuing C-Suite support even as it colluded and
20 undermined it with Zunum's relationships other partners and investors, was devastating to
21 Zunum's financial condition and its ability to develop strategic relationships, pursue alternative
22 investors, and scale to commercialize its aircraft. Boeing did so, even as its venture capital
23 division, a lead investor in Zunum, committed to play a key role in leading Zunum's fundraising
24 activities by engaging outside investors and driving up valuation.

1 324. In reality, Boeing repeatedly discouraged investors from investing in Zunum, and
2 suppressed the company's valuation. The pattern of undermining partook of breaches of contract
3 and other duties, including fiduciary duties, as well as engaging in an overarching pattern of
4 misleading and inducing reliance in a manner that was, as a totality, harmful, unfair, and
5 deceptive.

6 325. For example, the Series B investment round that Zunum was raising in January
7 2018 targeted a raising of funds of \$80 to \$90 million, with Zunum valued between \$240 to \$400
8 million, targeting sale of up to 30% of ownership of the company, which is typical for a venture
9 financing round.

10 326. When Boeing and HorizonX induced Zunum to halt its Series B investment round
11 to negotiate an MSR for Boeing to become a sole investor, it committed to a \$10 million in bridge
12 financing within a month on terms that were consistent with the Series B investment round.
13 Boeing then took several months to propose an agreement for the bridge financing, placing
14 Zunum in jeopardy, and proposed a \$40 million cap on Zunum's valuation.

15 327. The \$40 million cap proposed would make it all but impossible for Zunum to
16 raise a subsequent Series B on anywhere near the proposed valuation of \$240 to \$400 million,
17 contrary to Boeing's assurance that the bridge financing was intended to carry or bridge Zunum
18 to the Series B round of funding.

19 328. Moreover, it would enable HorizonX and Boeing to take on majority ownership
20 of Zunum, and therefore effective control of Zunum, with a modest subsequent investment given
21 that the cap would inevitably anchor subsequent valuations.

22 329. When Zunum requested an uncapped investment or a cap aligned to the valuation
23 of \$240 to \$400 million proposed for the subsequent Series B investment round, HorizonX
24 reduced the bridge financing to \$4 million, forcing Zunum to scale back its development plan to
25 curtail costs and delaying the entry of the ZA10 from 2022 to 2023. This was contrary to Mr.

1 Jones's prior urging of Zunum to continue scaling up development for a planned launch in 2022,
2 which required undiminished spending even while Zunum's financial resources were being
3 depleted.

4 330. The delayed Series B, followed by another delay to a reduced bridge loan
5 financing, forced Zunum to reduce its Series B fundraising target from \$80 to \$90 million to \$40
6 to \$50 million in June 2018, depressing its implied valuation from \$240 to \$400 million down to
7 \$160 to \$200 million. Zunum had no choice but to adopt this approach because of the financial
8 jeopardy caused by these funding delays.

9 331. At this time, Boeing still claimed to be working towards an MSR with Zunum,
10 while UTAS and Safran planned to invest an additional \$15 million towards the bridge facility
11 in July 2018. Meanwhile, the \$30 million investment from Hong Kong had stalled given
12 uncertainty due to the impending passage of the Foreign Investment Risk Review Modernization
13 Act of 2018 ("FIRRMA"), enacted in August 2018.

14 332. UTAS abruptly reversed its commitment to invest in late July, and Boeing
15 reversed on the MSR for the second time in early August, informing Zunum that its participation
16 would therefore be 20% of the raise, or \$10 million or the proposed reduced \$50 million Series
17 B. Boeing also required a separate co-lead investor for the next investment round and that the
18 valuation be set by others given Boeing's refusal to do so, contradicting Mr. Jones's prior
19 statement that HorizonX would support Zunum as an investor to "drive up the valuation."

20 333. Boeing's interference with the establishment of a value for Zunum suppressed the
21 financing terms further. Zunum enlisted SCV to value the company in partnership with an
22 aviation-focused investor who was raising funds to invest in Zunum. The two valued Zunum at
23 \$125 million in September 2018 down from the already previously reduced Series B valuation
24 of \$160 to \$200 million.

1 334. Further delays in the closing with SCV pushed the closing date to October 22,
2 2018, well past the time that Zunum had run out of operating funds. Meanwhile, Zunum had
3 cleared all conditions to the SCV and Boeing financing, including further negotiation with SCV
4 to meet its target to acquire 5% of Zunum.

5 335. As a result, in reliance on SCV's assurances that its investment would close by
6 October, Zunum leaders made the difficult decision to expose the company to liabilities upwards
7 of \$4 million to avoid furloughs and loss of wages because financing was just weeks away. The
8 founders of Zunum stopped drawing a salary in September 2018 and have remained engaged in
9 the recovery unpaid ever since, as when Zunum was operating in stealth mode.

10 336. The abrupt reversal by Boeing and SCV on co-leading the Series B round in
11 October 2018 sent Zunum into a tailspin. Boeing reiterated its commitment to invest \$10 million
12 conditional on Zunum finding a co-lead to replace SCV. Zunum had developed investors to
13 follow SCV and Boeing and engaged an investment bank to build on this pipeline to close the
14 round urgently.

15 337. Nevertheless, given its finances, Zunum had no choice but to take immediate,
16 drastic measures in order to survive. It furloughed all employees, launched outreach to other
17 aerospace programs to find contract work to engage its engineers, and raised emergency loans to
18 cover the limited operating costs that remained.

19 338. Boeing also proposed to send Zunum contract work to help it retain its engineers.
20 Moreover, given Zunum's urgent hunt for a co-lead investor to join Boeing due to Boeing's
21 changing position on the Series B financing, Mr. Jones and Dr. Kumar also scheduled HorizonX
22 to view Zunum's program to fast-track due diligence ahead of its investment. Mr. Jones also
23 noted that the Boeing team performing the review would also use that exposure to Zunum talent
24 and facilities to identify contracting opportunities in order to help Zunum during its time of
25 financial distress.

1 339. Although pitched as a due diligence review, HorizonX sent in a panel of senior
2 engineers from Boeing and Aurora to perform a “Zunum IP assessment.” During the review,
3 Zunum’s technical leaders were repeatedly interrupted and asked to focus purely on describing
4 intellectual property, and other acquirable Zunum resources.

5 340. One of the leaders from Aurora, who was on Zunum’s Advisory Board prior to
6 joining Boeing, subsequently travelled to Zunum’s Electric Power Center in Illinois, purportedly
7 to review the facility first-hand as a possible service provider to Aurora, when in reality the effort
8 was to gather competitive information.

9 341. Through these actions, Mr. Jones and others at Boeing illustrated their preference
10 for Zunum to go under so that they could to strip-mine what remained.

11 342. These actions included a coordinated campaign to recruit Zunum staff, even as
12 Zunum was racing to find alternative funding. Zunum actually closed three contracts with startup
13 aerospace programs to retain employees, while pursuing co-lead prospects with the investment
14 bank.

15 343. Mr. Jones attempted to allay Dr. Kumar’s concerns about Boeing poaching
16 Zunum’s employees, writing, “The last thing Boeing wants to do is to extend support only to
17 have it seen as poaching employees and have a statement of work related to electrics create a
18 perception of IP infringement.” However, this is exactly what Boeing went on to do, which has
19 created both the perception and reality of intellectual property misappropriation.

20 344. In keeping with Boeing’s pattern of inducing reliance and then failing to deliver,
21 Boeing never offered Zunum any contract work. Instead, armed with visibility into Zunum talent
22 pool from the salvage-hunting “Zunum IP assessment” and on the timing of furloughs known
23 only to Zunum’s Board of Director, Boeing launched a systematic and coordinated campaign to
24 poach talent timed for the day after the furloughs were announced across all three Zunum centers.
25 Based on information and belief, this effort had been prepared well before, while these duty-

1 bound individuals were supposedly helping Zunum to find contract work. In actuality, the
2 perilous and vulnerable state that Zunum had been placed in was due to a series of misuses of
3 Zunum's trade secrets and confidential information, false pretenses regarding investment
4 inquiries and negotiations, and now a recruiting effort masked as revenue-triage assistance for
5 Zunum's benefit. This recruitment effort included personal outreach by the Aurora leaders who
6 had participated in the sham assessment to Zunum engineers, encouraging them to apply to roles
7 at Aurora.

8 345. Faced with this onslaught from Boeing on his engineers, the leader of the Zunum
9 center in Indiana reached out to Mr. Jones to inquire why this was happening. Mr. Jones
10 confirmed that he was aware of the campaign and that it had been timed to coincide with the
11 furloughs. Those furloughs in turn were the result of Boeing's shifting and declining promises
12 to secure additional funding. Mr. Jones also noted that Boeing was very impressed by Zunum
13 talent and could explore options to absorb the Indiana facility.

14 346. Thus, Mr. Jones, through his fiduciary role as an Observer on the Zunum Board
15 of Directors, exploited his access to confidential information about Zunum's financials and the
16 timing of its furloughs to enable Boeing to attempt to strip-mine Zunum's intellectual property
17 and talent to Zunum's detriment in order to further Boeing's own programs. Meanwhile, UTAS
18 also proposed to send Zunum contract work, but did not follow through. UTAS also proposed
19 to purchase Zunum's patent portfolio, and on hearing this, HorizonX also asked to be informed
20 in advance of any such distressed sale.

21 347. Meanwhile, Zunum continued to receive information on the dynamics that led to
22 the sudden withdrawal of SCV's imminent investment.

23 348. In November 2018, Zunum learned that, contrary to the repeated assurances from
24 Mr. Jones at HorizonX, no senior leader at Boeing had ever contacted the leaders of key Safran
25

1 business units to support Zunum as promised. The Safran business units viewed Boeing's silence
2 as Boeing withdrawing support for Zunum.

3 349. Then, in December 2018, Zunum learned from an Executive Vice President at
4 SHE that the President of SEP had blocked SCV's investment in Zunum. The executive
5 informed Zunum that the SEP President was beholden to Boeing and would only have blocked
6 the investment with encouragement or instruction from Boeing to do so. The executive also
7 noted to Zunum that the SEP leadership was in Washington State at the time to engage with
8 Boeing on a separate hybrid-electric concept.

9 350. Despite Boeing's assault on Zunum's assets, Zunum's urgent fundraising
10 campaign was starting to bear fruit in January 2019. The uncertainty that FIRRMA had caused
11 for foreign investments had cleared, and Zunum re-engaged with the investor from Hong Kong
12 that HorizonX had traveled with Dr. Kumar to visit the year prior.

13 351. Prior to the Chinese New Year, Zunum received a term sheet from the investor
14 for a \$15 million investment, valuing the company now at \$88 million, down from the most
15 recently previously reduced valuation of \$125 million, with a closing targeted for February 2019.
16 Given FIRRMA, the investor had agreed with Zunum for the investment to be non-controlling,
17 with ownership limited to 9.9%, and with no rights to any technical information, or to participate
18 in Zunum's corporate governance.

19 352. However, Boeing's pattern of interference in Zunum's fundraising continued. In
20 early February 2019, on hearing of Zunum closing \$15 million with the investor in Hong Kong,
21 HorizonX abruptly withdrew its commitment to co-lead with \$10 million, even though it was
22 fully aware that Zunum's entire pipeline of investors had been cultivated on the basis that Boeing
23 was leading the investment with \$10 million. In effect, Boeing set increasingly higher bars, and
24 when Zunum met them, like finding a co-lead investor, reneged, all the while proceeding with
25

1 its own internal effort competing directly against Zunum by using trade secrets misappropriated
2 from Zunum.

3 353. Mr. Jones, who was promoted to the Vice President of HorizonX when Safran
4 withdrew from investing in Zunum, represented that HorizonX's withdrawal of support was
5 related to internal sensitivity around co-investing with a China-based investor. This was
6 implausible because Mr. Jones had previously joined Zunum in China to cultivate this very
7 relationship. Furthermore, the non-controlling equity structure without information rights would
8 have addressed any such sensitivity. Mr. Jones also noted that an investment by this investor
9 meant that Boeing could no longer contemplate the MSR that it had dangled in front of Zunum
10 for the past year.

11 354. When Zunum and the investor in Hong Kong were engaging on closing
12 documents in March 2019, HorizonX followed by purporting to require that Zunum repay its
13 promissory notes with Boeing, causing further disruption in the closing mechanics. HorizonX
14 later agreed to convert the 2017 Note and extend the 2018 Note for 18 months. However, the
15 new investor declined to transfer funds as scheduled, claiming a change of heart due to the recent
16 crashes of the Boeing 737 MAX.

17 355. Zunum had maintained its facilities on life-support in anticipation of financing,
18 with a subset of its engineers engaged on contracts with several aerospace ventures, though most
19 of the remainder resigned. But this final blow in April 2019 forced Zunum to close all of its
20 centers and lay off all employees, to minimize spend for what was expected to be a much more
21 arduous recovery, especially given the need to disclose these claims to any prospective investor.

22 356. This loss of its engineers, who had collectively built an unmatched electrified
23 aircraft and propulsion development capability, dealt a severe blow to Zunum.

24 357. Leaks by Safran and HorizonX to the media further damaged Zunum's
25 fundraising activities during this period. These leaks disclosed financial troubles at Zunum and

1 the withdrawal of Boeing's and Safran's support for the company, but with no reference to their
2 role in causing Zunum's financial distress.

3 358. In an article on Safran's ambitions to become a leader in HEPS technology by
4 2025, *Aviation International News* noted in March 2019 that the Zunum turboshaft "contract is
5 considered by Safran as a 'sleeping project,' since Zunum Aero has run into financial trouble."

6 359. HorizonX went further in an August 2019 article in *Aviation International News*
7 titled "Zunum's Electric Airliner Prospects Appear Increasingly Remote," which reported that
8 in "September 2018, Logan Jones, vice president of Boeing's HorizonX 'innovation cell' quietly
9 stepped down as the airframer's representative on the Zunum Aero Board – apparently signaling
10 the end of Boeing's backing of the company." Mr. Jones confirmed this timeline on his LinkedIn
11 profile which lists him on the Zunum Board of Directors from February 2017 to September 2018.
12 However, HorizonX did not inform Zunum of any change, until Zunum addressed the issue in
13 its response to HorizonX's demand for repayment in December 2019. HorizonX later sent
14 documentation as if the change had happened earlier, effectively acknowledging that it had
15 pulled support back long before, but just had not told Zunum, effectively misleading it.

16 360. In retrospect, this statement is consistent with Boeing's actions in September
17 2018, when it signaled a lack of support for Zunum to Safran leadership, took steps to strip-mine
18 Zunum's intellectual property and talent, and then withdrew its proposed \$10 million, after
19 Safran abruptly reversed its investment plans.

20 361. At the time, however, HorizonX repeatedly misled Zunum by asserting its support
21 for the financing and insisting that HorizonX would cause Boeing to communicate that support
22 to the Safran leaders. HorizonX maintained this false message of assurances to Zunum through
23 February 2019, inducing Zunum into financial distress by expending the last of its emergency
24 funds in a futile search for a co-lead of the supposed Series B financing with Boeing. HorizonX
25

1 kept Mr. Jones in his role as Observer on the Zunum Board of Directors to keep up the false
2 impression of continuing support and fiduciary involvement.

3 362. Zunum was in the process of closing a financing in August 2019 led by an
4 aerospace entrepreneur, who withdrew after senior executives at his company feared retaliation
5 from the aerospace OEMs. Then, in December 2019, when Zunum was preparing to close \$5
6 million in interim financing with a syndicate of investors from Europe and Asia, HorizonX
7 demanded repayment of the convertible notes, reversing its commitment in April 2019 to extend
8 the notes by 18 months so that Zunum could recover. The fresh threat from Boeing caused that
9 fundraising opportunity to evaporate.

10 363. It also severely constrained Zunum's already difficult financial recovery to a
11 small set of global investors with the appetite and resources to place much greater funds at risk
12 in light of the demands from HorizonX and the apparent hostility of major aerospace players.
13 Yet Zunum has persevered, although progress stalled for much of 2020 due to the COVID-19
14 pandemic.

15 364. Boeing also interfered with other investors. Mr. Jones destroyed JetBlue
16 Technology Ventures' trust in Zunum when he attacked Dr. Kumar in November 2018 on false
17 grounds and insisted that he be removed because he had previously raised concerns around
18 Boeing's conduct with respect to Zunum's intellectual property. In effect, he portrayed Dr.
19 Kumar's concerns about Boeing's trade secret theft as a basis for Boeing disliking him, and a
20 reason why JetBlue Technology Ventures should not do business with him.

21 365. Zunum was informed that two of the investors that Zunum was developing in
22 December 2018 and January 2019 had independently contacted senior executives at Boeing and
23 HorizonX for feedback about Zunum and had been discouraged from investing.
24
25

1 366. Zunum had introduced Mitsubishi to HorizonX in 2018 when Mitsubishi was
2 pursuing an investment in Zunum. In 2020, Zunum learned that HorizonX had falsely informed
3 Mitsubishi that Zunum had liquidated its assets.

4 367. In June 2020, Zunum learned that Boeing had redirected to Aurora funds that it
5 had previously earmarked to support Zunum.

6 368. The series of events of repeated promises, assurances, induced reliance, followed
7 by interfering, undermining and delays, then overt subversion and wrongful conduct resulted in
8 the effective disablement and attempted dismantlement of Zunum by Boeing and Safran. The
9 motive of disrupting competition, new markets, and models that affect an effective lock on short-
10 haul flight aircraft, and technological capture for Boeing and Safran, suggests that these events
11 are all part of a common, hostile plan of collusion evident in the naked theft of trade secrets
12 demonstrated in the BHE-11 and shared by Boeing with Safran.

13 **L. Boeing and Safran Misappropriated Zunum's Trade Secrets**

14 369. Based on information and belief, HorizonX, Boeing, Safran, SCV, SEP, and SHE,
15 used their extensive due diligence and technological assessments of Zunum, and HorizonX's
16 Board Observer, to misappropriate Zunum's intellectual property, trade secrets, and proprietary
17 information.

18 370. For example, Boeing necessarily disclosed to Safran and UTAS substantial detail
19 on the technologies, market opportunity, and economic viability of the Zunum ZA10 hybrid-to-
20 electric aircraft and propulsion system in engaging with Safran and UTAS in the summer and
21 fall of 2017 on the Boeing BHE-11 aircraft, when inducing Safran and UTAS to initiate work on
22 a hybrid-electric propulsion system for the BHE-11. Boeing planned to commercialize the BHE-
23 11 in 2024, at operating and acquisition costs significantly below an equivalent conventional
24 aircraft, such as the Pilatus PC-12. Thus, Boeing dramatically reversed its prior assertions that
25 commercial hybrid aircraft were not viable ahead of the 2040s, and would be economically

1 uncompetitive, disclosing many elements of Zunum's zealously guarded innovative and
2 contrarian perspectives to powerful competitors. It also encouraged these competitors to enter
3 the market for hybrid propulsion in partnership with Boeing, thus excluding Zunum and
4 foreclosing Zunum's first-mover advantage. Based on disclosures by the Executive Vice
5 President of SHE to Zunum in December 2018, announcements in 2019, and patents filed by
6 Boeing and Safran in 2018 and 2019 which were, on information and belief based on incomplete
7 information, curiously aligned with Zunum's own patent filings, it appears that Boeing's
8 combination with Safran has continued.

9 371. In order for these entities to assess feasibility and prepare a properly-scoped
10 proposal for production of a hybrid-to-electric propulsion system, they would have needed to
11 know the required specifications and extensive technical detail, which Boeing could only have
12 obtained from its extensive due diligence of Zunum.

13 372. Based on information and belief, Safran also attempted to usurp the technology
14 that Zunum innovated and the business opportunity that Zunum innovated and developed,
15 through Safran's program to pursue its own, competitive hybrid propulsion, which is staffed by
16 many of the same leaders and engineers who led Safran's engagement with Zunum.

17 373. SCV expressly conditioned its proposed investment on Zunum entering into
18 development agreements with Safran business units, which Zunum did.

19 374. This gave Safran extensive access to Zunum's technology and a market roadmap
20 through investment due diligence and development of collaboration plans, subject to appropriate
21 confidentiality and trade secret protection.

22 375. However, only a few weeks after Zunum and the Safran business units entered
23 into a long-term turboshaft and joint development agreement, SCV abruptly reneged on its
24 proposed investment.

1 376. Within months of the reversal, Safran announced its intent to lead the market for
2 hybrid-electric propulsion systems by 2025. Safran also moved up its timeline for a short-haul
3 hybrid-electric aircraft to 2025, which it had targeted for 2041 prior to its exposure to Zunum's
4 proprietary information. Safran also moved up its projected timeline for a regional hybrid-
5 electric aircraft to 2030 from 2049 previously. These shifts are by 16 and 19 years. Safran also
6 published a website and brochure promoting its work on commuter aircraft that closely mimics
7 the market opportunity that Zunum disclosed to Boeing and later to SCV. For example, Safran's
8 website states: "Safran is also interested in another application: small commuter aircraft in the
9 10-passenger class. Hybrid propulsion architectures could make these planes a competitive
10 proposition for regular rounds of a few hundred miles in certain parts of the world. The United
11 States, for example, has more airports than any other country, yet an estimated 80% of them are
12 underused or unused due to the difficulty of operating conventional airplanes profitably over
13 short distances, and especially the overly restrictive noise regulations at those local airfields.
14 While all electric propulsion is unrealistic in the near term, a variety of hybrid designs are entirely
15 conceivable."

16 377. This vision is directly contrary to what SCV expressed to Zunum in 2017 as its
17 understanding based on its conventional wisdom regarding the infeasibility in the near to mid-
18 term of hybrid-electric propulsion. Safran had determined then that such an aircraft was not
19 viable until the 2040s, but access to Zunum's technologies enabled this vast conglomerate to
20 accelerate its development plans by decades. Moreover, it was precisely to counter disbelief at
21 Safran in due diligence that Zunum provided it with an extensive body of confidential
22 information to demonstrate otherwise. The Safran website also promotes products, such as series
23 hybrid propulsion for vertical takeoff aircraft, premised on technology that Zunum advanced and
24 patented in 2014, as well as associated know-how and trade secrets.

1 378. In June 2019, Safran announced a partnership with Airbus and French airframer
2 Daher, supported by France through CORAC, the French Civil Aviation Research Council, to
3 develop a hybrid-propulsion aircraft demonstrator known as EcoPulse. This demonstrator
4 passed its Preliminary Design Review in December 2020, a key step toward first flight tests
5 scheduled in 2022. Given Daher's line of turboprop aircraft, this partnership will enable entry
6 by Daher into the market Zunum had developed with the Zunum ZA10 aircraft.

7 379. In May 2020, Safran announced its partnership with Sabrewing to provide hybrid-
8 electric propulsion for its Rhaegel-A vertical takeoff aircraft. This appears, on information and
9 belief based on incomplete information, to draw on technologies that Zunum patented in 2014,
10 and associated other protected technologies, which Zunum provided to Safran to support due
11 diligence for its investment and scoping of a collaboration with Zunum. Several of the plans
12 announced appear to be derived from information learned from Zunum, including the hybrid
13 vertical take-off aircraft, series hybrid propulsion, electric ducted propulsors, operational
14 requirements, and commercial terms related to the Ardiden 3 turboshaft as a range extender.

15 380. In September 2018, a Safran entity filed a patent for a hybrid propulsion assembly
16 for aircraft that is, on information and belief, directly inspired by confidential information that
17 Zunum supplied to SCV and its affiliates in connection with their due diligence for an investment
18 in Zunum.

19 381. In addition, in December 2018, Boeing filed a patent for a Thin Haul Hybrid
20 Electric Propulsion System, which is part of what underlies the Boeing BHE-11 model. This
21 patent, on information and belief, borrows heavily from Zunum's ZA10 architecture, which
22 Zunum has yet to disclose publicly, but which Boeing had access to through its due diligence of
23 Zunum, meetings of Zunum's Board of Directors, and other access to Zunum's confidential
24 information.

1 382. On March 1, 2019, Boeing filed a patent for an Active Voltage Control for Hybrid
2 Electric Aircraft, which patent was granted on March 17, 2020. This patent, on information and
3 belief, relates closely to issues addressed by the control system in an international patent filed by
4 Zunum in August 2018. A precondition for patent issuance is a representation of inventorship,
5 which means that it did not exist previously, and that someone else did not invent it.

6 383. Notably, one of the inventors listed on Boeing's voltage control patent was a
7 Senior Technical Fellow for BCA who was involved in designing the BHE-11, who was one of
8 the commenters in the spreadsheet that was inadvertently shared with Zunum in April 2018 and
9 who attended Boeing's "investment" assessment of Zunum's intellectual property in November
10 2018.

11 384. Boeing's patents also reveal that it is, on information and belief, pursuing a series
12 hybrid-electric architecture, following Zunum's unique approach. This is an approach that
13 Boeing's engineers had previously rejected prior to gaining access to Zunum's trade secrets and
14 proprietary information.

15 385. In an October 2019 issue of *Northwest Aerospace News Magazine*, Boeing
16 described an approach for "the right economics for affordable transportation" and intermodal
17 convenience, which is a key component of Zunum's overall strategy, including the total-cost
18 door-to-door metric that Zunum used as key basis for its development. Boeing had not
19 previously focused on these features, but it learned of them from Zunum through HorizonX's
20 request for information on Zunum's unpublished patent filing on multi-modal transport and its
21 proprietary modeling of transportation markets, which Zunum had shared pursuant to the 2017
22 IRL.

23 386. In 2020, John Langford, who was the Chief Executive Officer of Aurora, left to
24 found Electra.aero, an electric aviation venture that now competes directly with Zunum in the
25 markets for hybrid-to-electric aircraft, short-haul flights under 1,500 miles, and integrated door-

1 to-door travel that Zunum had disclosed to Boeing beginning in 2016. Mr. Langford had traveled
2 to Zunum's offices in early 2018, shortly after Boeing acquired Aurora. Dr. Bradley, who was
3 a Technical Fellow at BCA and heavily involved in the due diligence of Zunum as well as
4 involved in the BHE-11 replica of the ZA10, also left to join Electra.aero.

5 387. The trade secrets and proprietary information that Zunum was required to share
6 with HorizonX and Boeing as part of their due diligence are also transformational for the next
7 generation of Boeing's single-aisle class of aircraft. The engineers and technological leaders at
8 Boeing, including personnel from BCA and Aurora, responsible for shaping the next generation
9 of Boeing aircraft were heavily exposed to Zunum's technology.

10 388. In December 2019, *The Economist* magazine forecast that Boeing would have to
11 consider hybrid-electric propulsion for its next generation of aircraft. Otherwise, Boeing would
12 be locked into aircraft design and technology that will be rendered obsolete by the concepts that
13 Zunum has introduced. Boeing's only competitor, Airbus, had also announced that its next
14 generation of airliner will likely be hybrid-electric, and Boeing will have no choice but to follow
15 suit to remain a dominant force in its primary market. *The Economist* reiterated the need for
16 Boeing to prepare for the next battle with Airbus in October 2020, after Airbus unveiled plans to
17 bring net-zero emissions aircraft to market by 2035.

18 389. Furthermore, in late-November 2020, Steven Udvar-Hazy, the Chief Executive
19 Officer of Air Lease Corporation, who is one of the most influential voices in the aircraft leasing
20 community, said at the Skift Aviation Forum that he expects the next clean-sheet aircraft from
21 Boeing and Airbus to feature hybrid propulsion. He noted that conventional turbofan technology
22 is touching the limit of what it can achieve for efficiency: "I have serious doubts that either
23 Boeing or Airbus can design an all new airplane using current aerodynamic engine technologies
24 that can have a meaningful – let's call it double-digit advantage over what we already have," he
25 said, adding: "So what I see evolving is more of a hybrid."

1 390. Mr. Udvar-Hazy also noted that he sees hybrid propulsion as a transition to zero-
2 carbon alternatives such as all-electric or hydrogen-powered aircraft, verifying the vision that
3 Zunum has designed technology and a pathway to achieve.

4 391. Meanwhile, in July 2020, Roland Berger, a leading European consultancy,
5 announced a path to net-zero emissions for global aviation with an imperative to invest in new
6 propulsion technologies and deploy them in range-appropriate missions, identifying all-electric,
7 hybrid-electric, and fuel cell aircraft as key to aircraft used for flights up to 3,700 miles, all
8 addressed by Zunum's flexible hybrid-to-electric propulsion technologies.

9 392. This is consistent with Boeing's and HorizonX's mandate to identify
10 groundbreaking technology that threatens to disrupt Boeing's business model and to propel it
11 into the next century of aircraft design and manufacture in the era starting with its centennial
12 year in 2016, about the same time that Zunum began discussions with Boeing.

13 393. The widespread misappropriation and dissemination of Zunum trade secrets was
14 enabled by the absence of any "clean process" at Boeing or Safran to protect Zunum's proprietary
15 information, exposing Zunum's proprietary information to many senior technical and
16 commercial leaders from across Boeing and Safran business units. Such "clean" processes are a
17 well-established practice in investment and mergers and acquisitions due diligence processes,
18 precisely to prevent this form of misuse and the foreseeable damages that could flow from
19 misappropriation of trade secrets.

20 394. Boeing did so despite Mr. Fernandes recognizing in July 2016 that such exposure
21 "would put the tech fellow's ability to perform their job at risk within the company because
22 Zunum's roadmap includes airplanes of many sizes with subsystems that are and may become
23 highly relevant to what we do in our core businesses today." Mr. Jones acknowledged this issue
24 in April 2018 when Dr. Kumar notified him of the continuing misappropriation disclosed in the
25 Boeing spreadsheet, informing Dr. Kumar that HorizonX had implemented policies to ensure

1 Boeing personnel engaged with a portfolio company are disallowed from working in any related
2 area at Boeing in the future. However, Boeing never followed through with implementing such
3 protections with respect to Zunum's proprietary information, trade secrets, and other confidential
4 information. On the contrary, Boeing seemed to implement a pattern or program of
5 systematically disseminating Zunum's proprietary information, trade secrets, and other
6 confidential information throughout Boeing. For example, Mr. Jones subsequently directed a
7 panel of senior Boeing engineers, engaged in similar programs across Boeing, to travel to Zunum
8 to assess its IP in November 2018, in an apparent strip-mining exercise.

9 395. Boeing and Safran went further by intentionally exposing Zunum and its
10 proprietary information to a range of individuals that had been tasked specifically to launch
11 competing businesses. For instance, Boeing combined HorizonX (a venture capital arm), led by
12 Mr. Schettler and receiving insight into future markets and technologies, with a Disruptive
13 Innovation unit (responsible for launching businesses with Boeing), led by Mr. Fernandes, and
14 thereby created a channel for Boeing to build businesses to capitalize on that insight. In fact,
15 Mr. Fernandes took on leadership of the Disruptive Innovation unit immediately after concluding
16 due diligence on Zunum, moving immediately to lead activities such as the competing BHE-11
17 program and exploring Zunum's technologies, while continuing to serve on Zunum's Advisory
18 Board through the end of the 2017. Mr. Nordlund and Dr. Kunz, along with most of the
19 HorizonX staff, transitioned to Boeing Next, a rebranding of the Disruptive Innovation unit, after
20 exposure to extensive Board-level information on Zunum's technologies and plans. Mr.
21 Fernandes now serves as Vice President of Strategy at BCA, where he is in a position to apply
22 his extensive knowledge of the disruptive impact of hybrid-to-electric aircraft on Boeing's
23 single-aisle airliners on flights up to 1,500 miles.

1 **M. Exclusionary Conduct**

2 396. Boeing's conduct reflects a systematic and concerted effort to exclude Zunum
3 from the marketplace by impeding its ability to raise external funds, keeping Zunum beholden
4 to Boeing while also sidelining it, and launching its own directly competing initiative to exploit
5 the opportunities and technology that Zunum had identified, innovated, developed, and owns.

6 397. It did this through a calculated campaign to extract and then exploit Zunum's
7 intellectual property under the guise of investment due diligence and strategic collaboration on
8 development of the ZA10. Trade secrets that became part of Boeing's portfolio help it to protect
9 and further advance its dominant market position in the aircraft manufacturing industry, but
10 dispersion of trade secrets to others, including partners such as Safran, staff that leave to found
11 startups, or simply talking publicly, dissipates those trade secrets, making them no longer
12 defensible as trade secrets. This in turn destroys the ability of another (non-Boeing, non-Safran)
13 market mover to claim exclusivity or a competitive advantage. That in turn undermined Zunum's
14 ability to finance its first-mover advantage, preserving the status quo and advantage of the
15 dominant player, Boeing (along with its systems providers, such as Safran).

16 398. SCV, SEP, and SHE followed a similar plan, meanwhile working directly with
17 Boeing and HorizonX to pursue and then exploit Zunum's innovation while excluding Zunum.

18 399. Boeing combined with Safran to replicate Zunum's ZA10 aircraft so that Zunum
19 could not compete with Boeing and to position Boeing to dominate the nascent market for
20 hybrid-electric or all-electric aircraft, and routes under 1,500 miles in the United States, which
21 threatened to cannibalize up to 80% of the current flight share of Boeing's 737 aircraft.

22 400. As evidence of Boeing's collusion with Safran, in September 2019, SEP and
23 HorizonX announced an investment in Electric Power Systems, touting that "Safran will
24 collaborate with EPS to offer our customers electric or hybrid-electric propulsion systems with
25 a level of performance that sets us apart from the competition."

1 410. Section 2 of the PIA provides:

2 Each Party agrees that it will preserve in confidence, not disclose to
3 others, and not use (except for the purpose set forth in Recital A. of this
4 Agreement) any and all Proprietary Information received from the other
5 Party prior to and after execution of this Agreement; provided that
6 Proprietary Information, when first received from the disclosing party,
7 must be either (i) in written form and marked with an appropriate
8 restrictive legend or (ii) not in written form but initially identified to the
9 receiving party as proprietary and/or confidential and thereafter promptly
10 confirmed, in writing to the receiving Party within 30 days, as being
11 Proprietary Information.

12 411. The purpose set forth in Recital A was for “executive level discussions to explore
13 the feasibility of potential projects in the field of electric based power systems for aviation use.”

14 412. Section 1 of the PIA defines Proprietary Information “to mean all proprietary,
15 confidential, and/or trade secret information disclosed by either Party to the other and pertaining
16 to aircraft and propulsion technologies to power hybrid-electric regional air networks”

17 413. Section 3 of the PIA provides that “nothing in this Section shall be deemed to
18 restrict inadvertent use of general ideas, concepts, processes and techniques retained in the
19 unaided memory of a Party’s Representatives”

20 414. Between August 16, 2017, and February 1, 2017, Zunum disclosed a substantial
21 volume of proprietary information concerning the disruptive market opportunity that Zunum had
22 identified for replacing conventional aircraft with hybrid-electric aircraft, extensive modeling
23 and analysis concerning the economic opportunity and technological components necessary to
24 pursue the opportunity, and its unique series hybrid-electric propulsion systems, including
25 systems, tools, devices, formulae, software, algorithms, and other trade secrets.

 415. The information that Zunum disclosed to Boeing pursuant to the PIA was
Proprietary Information as defined in the PIA.

 416. The information that Zunum disclosed to Boeing pursuant to the PIA was
generally unknown to Boeing and in the aerospace industry.

1 417. The information that Zunum disclosed to Boeing pursuant to the PIA gave Zunum
2 a competitive advantage that Boeing usurped and then exploited through breach of the PIA.

3 418. Zunum vigorously guarded the information that it disclosed to Boeing pursuant
4 to the PIA.

5 419. The information that Zunum disclosed to Boeing pursuant to the PIA in written
6 form was marked as confidential or proprietary.

7 420. Boeing breached the PIA by disseminating the information widely within Boeing
8 and disclosing the information that Zunum shared with it with third parties, including SEP and
9 SHE, through Boeing's request for bids for a hybrid-electric propulsion system for the BHE-11.

10 421. Upon information and belief, Boeing also breached the PIA by disclosing the
11 information that Zunum shared with it with Aurora, which Aurora appears to have used to
12 prepare a white paper purporting to dispute Zunum's data and results.

13 422. Boeing breached the PIA by using the information that Zunum shared with it for
14 purposes other than as set forth in Recital A, including to develop the BHE-11, and to provide to
15 its staff that discussed, used, and disclosed such information, including in going on to form new
16 ventures that have benefitted from unrestricted use of Zunum's proprietary information.

17 423. Boeing breached the PIA by retaining and using Proprietary Information
18 disclosed pursuant to the PIA in written notes and other documents.

19 424. As a result of Boeing's breaches of the PIA, Zunum has suffered damages in an
20 amount to be established at trial.

21 425. As a result of Boeing's breaches of the PIA, Zunum has also suffered, and
22 continues to suffer, irreparable harm, not fully compensable by damages.
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VI. CAUSE OF ACTION - COUNT II:
BREACH OF 2017 INVESTOR RIGHTS LETTER
(AGAINST BOEING AND HORIZONX)

426. Zunum restates, re-alleges, and incorporates by reference each of the allegations set forth in the preceding paragraphs as if fully set forth herein.

427. The 2017 IRL is a valid contract integrated with the March 17, 2017, Convertible Promissory Note and Note Purchase Agreement between Zunum and Boeing, and is supported by a mutual exchange of consideration.

428. The 2017 IRL is governed by Delaware law.

429. In Section 5 of the 2017 IRL, Boeing agreed “to keep confidential and not disclose, divulge, or use for any purpose (other than to manage its investment in [Zunum], the ‘Purpose’), any confidential information obtained from [Zunum] from and after the date of this Agreement”

430. Section 5 also provides that “[n]otwithstanding the foregoing, the Investor will have the right to use and exploit Residuals for any purpose. ‘Residuals’ means ideas, information, and understandings retained in the unaided memory of the Investor’s personnel as a result of their access to, review, evaluation or use of Confidential Information for the Purpose.”

431. On May 1, 2018, Boeing transferred all of its rights and interests in the 2017 Convertible Promissory Note, Note Purchase Agreement, and 2017 IRL to HorizonX pursuant to a Transfer Agreement.

432. The Transfer Agreement expressly confirmed that Boeing “agree[d] to continue to be bound by Section 5 of the [2017 IRL] with respect to all Confidential Information (as defined in the [2017 IRL]) disclosed to [Boeing] through the date of this Agreement” Transfer Agreement § 1.

433. Between March 17, 2017, and May 1, 2018, Zunum disclosed to Boeing Confidential Information concerning: (a) detailed ZA10 aircraft designs and specifications,

1 breakdowns and performance, including trade-offs relative to alternate variants; (b) ZA10
2 economics; (c) market entry strategy; (d) certification activities and plans; (e) hybrid-electric
3 powertrain and electric propulsion system development programs; (f) electric motor systems
4 development programs; (g) range extender strategy and selection; (h) progress on battery pack
5 integration; (i) multi-modal strategy; (j) disruptive tradeoff algorithms; (k) lean cross-
6 disciplinary development plan and budgets to entry in 2022; (l) flight testbed plans and roadmap;
7 (m) key customers; and (n) key personnel.

8 434. Boeing breached Section 5 of the 2017 IRL by using Zunum's Confidential
9 Information, including its aided memory thereof, to develop the BHE-11 replica of the ZA10
10 and to compete directly against Zunum.

11 435. In particular, personnel in Boeing's BCA unit took, retained, and used written
12 notes of Zunum's Confidential Information as reflected in the slides that BCA presented on
13 December 12, 2017. In addition, personnel from Aurora also prepared a whitepaper purporting
14 to challenge Zunum's data and results.

15 436. On information and belief, Boeing also breached Section 5 of the 2017 IRL by
16 disclosing Zunum's Confidential Information to SEP and SHE through a solicitation for bids for
17 a hybrid-electric propulsion system for the BHE-11.

18 437. HorizonX breached, or aided and abetted a breach, of Section 5 of the 2017 IRL
19 by also taking, retaining, and using written notes of Zunum's Confidential Information, as
20 reflected in the spreadsheet with commentary that Dr. Kunz inadvertently sent to Dr. Kumar in
21 April 2018.

22 438. HorizonX's and Boeing's breach of the 2017 IRL also includes their launch of
23 the Boeing NeXt project to the degree that it exploited Zunum's trade secrets in the areas of
24 hybrid-electric propulsion, multi-modal traffic integration, and electric vertical takeoff and
25 landing.

439. Boeing also breached the 2017 IRL by using its Observers on Zunum's Board of Directors and Advisory Board to gain access to confidential and proprietary information to use for Boeing's competing programs, including the BHE-11 and Boeing NeXt, as revealed in Mr. Sinnett's announcement that the BHE-11 would also adopt the unique 12-passenger layout of the ZA10.

440. As a result of Boeing's and HorizonX's breaches of the 2017 IRL, Zunum has suffered damages in an amount to be established at trial.

441. As a result of Boeing's and HorizonX's breaches of the 2017 IRL, Zunum has also suffered, and continues to suffer, irreparable harm, not fully compensable by damages.

VII. CAUSE OF ACTION - COUNT III:
BREACH OF 2018 INVESTOR RIGHTS LETTER
(AGAINST HORIZONX)

442. Zunum restates, re-alleges, and incorporates by reference each of the allegations set forth in the preceding paragraphs as if fully set forth herein.

443. The 2018 IRL is a valid contract integrated with the May 1, 2018, Convertible Promissory Note and Note Purchase Agreement between Zunum and HorizonX and is supported by a mutual exchange of consideration.

444. The 2018 IRL is governed by Delaware law.

445. In Section 5 of the 2018 IRL, HorizonX agreed "to keep confidential and not disclose, divulge, or use for any purpose (other than to manage its investment in [Zunum], the 'Purpose'), any confidential information obtained from [Zunum] from and after March 17, 2017"

446. Section 5 also provided that "[n]otwithstanding the foregoing, the Investor will have the right to use and exploit Residuals for any purpose. 'Residuals' means ideas, information, and understandings retained in the unaided memory of the Investor's personnel as a result of their access to, review, evaluation or use of Confidential Information for the Purpose."

1 447. Zunum divulged substantial Confidential Information to HorizonX pursuant to
2 the 2018 IRL.

3 448. HorizonX breached the 2018 IRL by using Confidential Information obtained
4 from Zunum to attempt to poach its employees, which was not a permitted use of Zunum's
5 Confidential Information.

6 449. As a result of HorizonX's breaches of the 2018 IRL, Zunum has suffered damages
7 in an amount to be established at trial.

8 450. As a result of HorizonX's breaches of the 2018 IRL, Zunum has also suffered,
9 and continues to suffer, irreparable harm, not fully compensable by damages.

10 **VIII. CAUSE OF ACTION - COUNT IV:**
11 **BREACH OF IMPLIED COVENANT OF GOOD FAITH AND FAIR DEALING**
 (AGAINST BOEING AND HORIZONX)

12 451. Zunum restates, re-alleges, and incorporates by reference each of the allegations
13 set forth in the preceding paragraphs as if fully set forth herein.

14 452. Each of the PIA, 2017 IRL, and 2018 IRL, as well as the 2017 Note and 2018
15 Note, are subject to an implied covenant of good faith and fair dealing.

16 453. The 2017 IRL and 2018 IRL gave Boeing, and later HorizonX, a right of first
17 refusal to participate in new investments in Zunum and a right of first negotiation to provide
18 work for development or production of the ZA10 or other Zunum aircraft, except with respect to
19 the hybrid-electric propulsion system.

20 454. Boeing misused these contractual rights not for *bona fide* or genuine exercises of
21 its contractual rights but to impede Zunum's ability to obtain additional investments or to achieve
22 partnerships with other suppliers or OEMs for scopes of work necessary for the continued
23 development and production of the ZA10 and other Zunum technology.

1 455. For example, in February 2018, Boeing induced Zunum to abandon its
2 fundraising as a precondition for a bridge financing of \$10 million and a joint venture with
3 Boeing that Boeing had no intent on closing with Zunum.

4 456. In addition, Boeing consistently held itself out as an interested aerostructures
5 partner with Zunum and used that as a basis to undertake extensive due diligence of Zunum's
6 technology.

7 457. Boeing used these rights to gain access to Zunum's trade secrets and proprietary
8 information, which it has used and is using to compete against Zunum and exclude Zunum from
9 the market opportunity and roadmap thereto that Zunum has identified and disclosed to Boeing.

10 458. The 2017 Note and 2018 Note include a call (demand for payment) feature that
11 Boeing has used strategically to demand repayment when Zunum was most financially
12 vulnerable, with such vulnerability being caused by Boeing's own actions.

13 459. As a result of Boeing's and HorizonX's breaches of the covenant of good faith
14 and fair dealing, Zunum has suffered damages in an amount to be established at trial.

15 460. As a result of Boeing's and HorizonX's breaches of the covenant of good faith
16 and fair dealing, Zunum has also suffered, and continues to suffer, irreparable harm, not fully
17 compensable by damages.

18 **IX. CAUSE OF ACTION - COUNT V:**
19 **BREACH OF FIDUCIARY DUTY (AGAINST BOEING AND HORIZONX)**

20 461. Zunum restates, re-alleges, and incorporates by reference each of the allegations
21 set forth in the preceding paragraphs as if fully set forth herein.

22 462. Zunum is a Delaware corporation, and its internal affairs are governed by
23 Delaware law.
24
25

1 463. The 2017 IRL and 2018 IRL, pursuant to which Boeing and HorizonX were
2 authorized to appoint an Observer to Zunum's Board of Directors, are also governed by Delaware
3 law.

4 464. Pursuant to the 2017 IRL and 2018 IRL, Boeing and HorizonX installed Mr. Jones
5 as an Observer on Zunum's Board of Directors.

6 465. Although the 2017 IRL and 2018 IRL specified that the Board Observer role
7 would be a non-voting role, Mr. Jones served as a *de facto* Board Member with significant
8 influence over the Board of Directors, as reflected above, including in paragraphs 125-147, 155-
9 173, 194-219, 232-242, 250-254, 262-263, 285-286, 293-298, 319, 332-333, 338-348, 353, 359-
10 361, and 364, *inter alia*.

11 466. Further, by virtue of Mr. Jones' unfettered access to Zunum's confidential
12 information and internal decision making and execution (especially in regard to obtaining
13 essential resources and assistance from Boeing and HorizonX), and actual participation in that
14 decision making, he became a *de facto* officer and fiduciary of Zunum.

15 467. Mr. Jones served as Boeing's Observer on Zunum's Board of Directors, at all
16 times as an agent of Boeing (including indirectly as an agent of HorizonX) subject to Boeing's
17 control and also with apparent authority to speak on behalf of Boeing including regarding to
18 Boeing's plans and intentions, which were essential to Zunum's development.

19 468. In addition, Mr. Jones purported to act on behalf of Zunum, and Zunum placed
20 significant trust and confidence in Boeing and HorizonX, both of which had superior knowledge
21 and access to information regarding Boeing's plans and intentions.

22 469. As a result of these circumstances, Boeing and HorizonX owed Zunum fiduciary
23 duties, including the duties of care and loyalty.

24 470. Boeing and HorizonX breached their fiduciary duties by usurping Zunum's
25 corporate opportunities in the markets for hybrid-electric and all-electric aircraft, flights serving

1 routes under 1,500 miles, and integrated door-to-door travel, and then exploiting them for
2 Boeing's benefit and to the detriment of Zunum.

3 471. Boeing and HorizonX breached their fiduciary duties by using Zunum's
4 proprietary information and trade secrets for their own account, which was harmful and unfair
5 to Zunum, and a violation of the duty of loyalty.

6 472. Boeing and HorizonX breached their fiduciary duties by impeding Zunum and
7 delaying its pursuit of its valuable opportunities, ultimately delaying its entry to market by two
8 years or more, causing waste to Zunum, and usurping Zunum's first-mover advantage in hybrid-
9 electric propulsion aircraft, as well as preventing the advancement of a first-mover, Zunum, that
10 was not Boeing-affiliated.

11 473. Boeing and HorizonX breached their fiduciary duties by acting contrary to
12 Zunum's best interests including by seeking to depress its enterprise valuation in order to attempt
13 to control or acquire Zunum or its portfolio of intellectual property and trade secrets at a more
14 favorable price and for their sole benefit as well as to poach Zunum's employees, or to dissipate
15 those assets so that others could not use them competitively.

16 474. As a result of Boeing's and HorizonX's breaches of their fiduciary duties, Zunum
17 has suffered damages in an amount to be established at trial.

18 475. In the alternative, if Mr. Jones's fiduciary duties as a *de facto* Director of Zunum
19 are not attributable to Boeing or HorizonX, then Boeing and HorizonX aided and abetted Mr.
20 Jones's breaches of fiduciary duties in his role as an individual.

21 476. Boeing and HorizonX both had knowledge of Mr. Jones's conduct and breaches
22 of fiduciary duties, including as Mr. Jones served as a representative of Boeing and HorizonX,
23 and reported to those entities in a manner such that his conduct was imputable to Boeing and
24 HorizonX as their knowing participation.

1 477. As a result of Boeing's and HorizonX's breaches of their fiduciary duties, Zunum
2 has also suffered, and continues to suffer, irreparable harm, not fully compensable by damages.

3 **X. CAUSE OF ACTION - COUNT VI:**
4 **DECLARATORY JUDGMENT (AGAINST HORIZONX)**

5 478. Zunum restates, re-alleges, and incorporates by reference each of the allegations
6 set forth in the preceding paragraphs as if fully set forth herein.

7 479. HorizonX has sought to compel repayment of the 2017 Convertible Promissory
8 Note and Note Purchase Agreement, as well as the 2018 Convertible Promissory Note and Note
9 Purchase Agreement.

10 480. The 2017 Note and 2018 Note are governed by Delaware law.

11 481. A genuine dispute exists as to whether Zunum is obligated to repay the 2017 or
12 2018 Notes.

13 482. Zunum seeks a declaration that its obligation to repay the 2017 or 2018 notes were
14 extinguished by: (a) Boeing's and HorizonX's prior, material breaches of the integrated 2017
15 IRL and 2018 IRL, as pleaded in Counts II and III, above; (b) Boeing's and HorizonX's prior,
16 material breaches of the implied covenant of good faith and fair dealing, as pleaded in Count IV,
17 above; (c) Boeing's and HorizonX's prior breaches of their fiduciary duties (and aiding and
18 abetting of Mr. Jones' individual fiduciary duties as a *de facto* officer and Director and fiduciary
19 of Zunum); (d) Boeing's and HorizonX's securities fraud, as pleaded in Count XI, below; and
20 (e) by Boeing's and HorizonX's frustration of performance, causation of supervening
21 impossibility or impracticability of performance, and frustration of purpose; *inter alia*.

22 **XI. CAUSE OF ACTION - COUNT VII:**
23 **TORTIOUS INTERFERENCE WITH BUSINESS EXPECTANCY**
24 **(AGAINST BOEING)**

25 483. Zunum restates, re-alleges, and incorporates by reference each of the allegations
set forth in the preceding paragraphs as if fully set forth herein.

1 484. Through its fundraising and development efforts, Zunum developed valid
2 business expectancies with several investors and business partners, including SCV and UTAS.

3 485. SCV expressed an interest in investing in Zunum, and Zunum had made
4 substantial progress toward closing on investments with SCV.

5 486. Boeing was aware of this business relationship, including due to its control of
6 HorizonX and Mr. Jones's position as an Observer on Zunum's Board of Directors, through its
7 (and later HorizonX's) preferred access to information and Zunum's management as well as due
8 to contractual rights to notice pursuant to the 2017 IRL and 2018 IRL.

9 487. Boeing interfered with each of these business expectancies, resulting in the
10 termination of Zunum's relationship with each such party.

11 488. For example, Boeing interfered with SCV's investment in Zunum by exerting
12 influence of the President of SEP to block the investment.

13 489. Boeing's and HorizonX's interferences were accomplished with improper means
14 and for improper purposes.

15 490. These improper means included with and by use of misappropriated proprietary
16 information, trade secrets, and intellectual property in breach of restrictive covenants in at least
17 three agreements and the attendant covenant of good faith and fair dealing. The improper means
18 also included Boeing's breach of its fiduciary duties to Zunum as an investor with Board
19 observation rights, including as to confidential financial plans, and finance constraints and
20 vulnerabilities.

21 491. These improper motives included for the purpose of attempting to restrain trade
22 and exclude Zunum from the market opportunities that it had innovated and was in the process
23 of developing through a pathway disclosed to Boeing and HorizonX.

24 492. As a result of these interferences with Zunum's business relationships and
25 expectancies, Zunum has suffered damages in an amount to be established at trial.

XII. CAUSE OF ACTION - COUNT VIII:
VIOLATION OF WASHINGTON TRADE SECRETS ACT
(AGAINST ALL DEFENDANTS)

493. Zunum restates, re-alleges, and incorporates by reference each of the allegations set forth in the preceding paragraphs as if fully set forth herein.

494. Zunum owns trade secrets across several subject-matter areas relating to hybrid-electric or all-electric aircraft and propulsion, and related market opportunities, as alleged above in paragraphs 80-90.

495. Boeing and HorizonX obtained access to trade secrets belonging to Zunum pursuant to agreements that strictly prohibited any use other than to evaluate an investment, manage the investment, or explore other collaboration with Zunum.

496. For example, Zunum provided Boeing and HorizonX with access to dozens of documents and studies reflecting Zunum's trade secrets and proprietary analyses on numerous topics, including, *inter alia*: (i) Zunum Aero detailed product, technology, market and financials; (ii) Zunum Aero market detail: commercial, cargo, business, and military; (iii) Zunum Aero door-to-door proposition and market sizing; (iv) Zunum Aero long-range costing and financial model; (v) Zunum Aero 18-month development and operating plan; (vi) Zunum Aero differentiation and production strategy; (vii) Zunum Aero differentiation vs Urban Air Mobility; (viii) Confidential workshop presentation: Operating costs of strong hybrid aircraft; (ix) Aircraft and propulsion key underlying forecasts detail; (x) ZA10 aircraft and propulsion design and development detail; (xi) ZA10 electric fan benchmarking and risk assessment; (xii) ZA10 aircraft and propulsion economics detail; (xiii) ZA10 aircraft and propulsion FAA certification plan detail; (xiv) ZA10 aircraft and propulsion development plan and resourcing detail; (xv) ZA10 aircraft and propulsion production plan and resourcing detail; (xvi) ZA10 aircraft development and production headcount, resource, and financing model; (xvii) ZA10 aircraft prototype and risk reduction plan; (xviii) ZA10 aircraft bridge workshop with Boeing BHE-11 team, December

1 2017; (xix) ZA10 aircraft materials and manufacturing trades, June 2018; (xx) ZA10 P0 500 kW
2 electric drive drawings release, August 2018; (xxi) ZA10 and ZA50 benchmarking to the Airbus
3 A320, August 2018; (xxii) Zunum capability development and ZA10 technical progress, August
4 2018; (xxiii) Zunum Aero Technology Review for Boeing, March 2017; (xxiv) Zunum Aero
5 Drilldown for Boeing CTO, December 2017; (xxv) Zunum Aero Intellectual Property Overview,
6 November 2018; (xxvi) Provisional Patent Filing: Range-Optimized Hybrid to all-Electric
7 Airlines and VSTOL Aircraft; (xxvii) Provisional Patent Filing: Systems and Methods for
8 Implementing Fast and Flexible Multi-Modal Transport; (xxviii) Provisional Patent Filing:
9 Methods for Implementing Quiet, Efficient, and Lightweight Electrically-Driven Propulsion for
10 Regional Aircraft; (xxix) Confidential whitepaper: Commercially viable reduction of aviation
11 carbon emissions, Response to report by the National Academies of Sciences, Engineering and
12 Medicine titled “Commercial Aircraft Propulsion and Energy Systems Research: Reducing
13 Global Carbon Emissions”; (xxx) Confidential Whitepaper: Our Battery Technology Strategy;
14 and (xxxi) Zunum Aero Technical Assets: Breakthrough Quiet Hybrid-Electric Aircraft and
15 Support Regional Air Transport Networks; along with numerous other documents and studies.

16 497. Boeing and HorizonX also owed a fiduciary duty to Zunum to act in its best
17 interests.

18 498. Boeing has improperly used Zunum’s trade secrets to replicate Zunum’s
19 proprietary aircraft design and attempt to usurp and exploit Zunum’s innovation reflected in its
20 trade secrets as well as Zunum’s first-mover advantage in order for Boeing to dominate the
21 market for hybrid-electric and all-electric aircraft, beginning with smaller aircraft for short-haul
22 flights, to the exclusion of other competitors including Zunum.

23 499. Boeing also improperly disclosed Zunum’s trade secrets to third parties including
24 Safran, SEP, SHE, and UTAS without Zunum’s express or implied consent.

1 500. SEP and SHE knew or should have known that the information disclosed to it by
2 Boeing was proprietary to Zunum because SCV was contemplating an investment in Zunum and
3 was deeply engaged in investment due diligence, diligence concerning SHE's production of the
4 turboshaft for the ZA10, and general diligence concerning a wide range of collaboration
5 agreements SCV required as a precondition to an investment in Zunum.

6 501. Safran, SCV, SEP, and SHE also obtained access to Zunum's trade secrets
7 pursuant to agreements directly with Zunum that strictly prohibited any use other than to evaluate
8 an investment or explore other collaboration with Zunum.

9 502. Safran, SCV, SEP, and SHE have improperly used the Zunum trade secrets that
10 they obtained from Boeing and directly from Zunum, to compete against Zunum and combine
11 with Boeing in the attempt to exclude Zunum from the hybrid-electric and all-electric aircraft
12 market.

13 503. HorizonX and SCV have also improperly used the trade secrets they obtained
14 from Zunum to identify and pursue investment decisions such as their joint investment in Electric
15 Power Systems.

16 504. The improper uses or disclosures by Boeing, HorizonX, Safran, SCV, SEP, and
17 SHE give these entities individually and in combination an unjust competitive advantage
18 presently valued at hundreds of millions of dollars and on a trajectory to be used to earn billions
19 of dollars in annual revenue.

20 505. Zunum vigilantly protected its trade secrets through limited disclosures on an as-
21 needed basis, disclosing information only pursuant to strict non-disclosure agreements, seeking
22 timely patent protection, providing materials through investment due diligence through a secure
23 data room, and requiring its employees to enter into non-disclosure agreements and non-
24 competition agreements.

1 506. Zunum’s trade secrets hold tremendous value, and their misappropriation by
2 Boeing, HorizonX, Safran, SCV, SEP, and SHE is giving each a significant competitive
3 advantage, including by way of forestalling or undermining competition for their incumbent
4 legacy products.

5 507. The misappropriation by Boeing, HorizonX, Safran, SCV, SEP, and SHE was
6 willful and malicious.

7 508. The ongoing, improper use of Zunum’s trade secrets by Boeing, HorizonX,
8 Safran, SCV, SEP, and SHE has proximately caused Zunum damages in an amount to be
9 established at trial.

10 509. Pursuant to RCW 19.108.030, Zunum is also entitled to exemplary damages in an
11 amount not exceeding twice its actual damages.

12 510. Pursuant to RCW 19.108.040, Zunum is entitled to an award of its attorneys’ fees.

13 511. The ongoing, improper use of Zunum’s trade secrets also serves to attempt to
14 exclude Zunum from the market and eliminate it as a competitor, causing Zunum irreparable
15 harm.

16 512. If the Court determines that it would be infeasible to prohibit future or ongoing
17 use of Zunum’s trade secrets by Boeing, HorizonX, Safran, SCV, SEP, and SHE, the Court
18 should expressly condition any future use on payment of a reasonable royalty to Zunum.

19 **XIII. CAUSE OF ACTION - COUNT IX:**
20 **VIOLATION OF WASHINGTON CONSUMER PROTECTION ACT (RCW 19.86.030)**
(AGAINST ALL DEFENDANTS)

21 513. Zunum restates, re-alleges, and incorporates by reference each of the allegations
22 set forth in the preceding paragraphs as if fully set forth herein.

23 514. The conduct of Boeing, HorizonX, SCV, Safran, SEP, and SHE violates RCW
24 19.86.030, which prohibits any “contract, combination, . . . or conspiracy in restraint of trade or
25 commerce”

1 515. Boeing and HorizonX on the one hand, combined and conspired with Safran,
2 SCV, SEP, and SHE the other hand, to restrain trade by excluding Zunum from the national and
3 international markets for hybrid-electric and all-electric aircraft, short-haul flights under 1,500
4 miles, and integrated door-to-door travel.

5 516. Boeing, HorizonX, Safran, SCV, SEP, and SHE did this through a systematic and
6 coordinated campaign to deny Zunum access to additional funding and to key inputs, like
7 funding, aerostructures support, and support for a turboshaft, all of which were necessary for
8 Zunum to continue its operations.

9 517. This conduct has foreclosed and continues to foreclose competition in these
10 markets and has delayed the introduction of hybrid-electric propulsion for aircraft to compete
11 with conventional aircraft which limit consumer travel options and convenience and are less
12 cost-effective and generate more noise and air pollution.

13 518. The conduct of Boeing, HorizonX, Safran, SCV, SEP, and SHE is illegal *per se*.

14 519. Alternatively, the conduct of Boeing, HorizonX, Safran, SCV, SEP, and SHE
15 violates the rule of reason by attempting to establish control of the market for hybrid-electric and
16 all-electric aircraft at an early stage and foreclosing competition including competition by
17 Zunum, the innovative first-mover in the field.

18 520. Boeing, HorizonX, Safran, SCV, SEP, and SHE were not meaningfully engaged
19 in or pursuing hybrid-electric propulsion or all-electric propulsion for aircraft prior to 2017. In
20 fact, they thought it was not technologically or economically feasible.

21 521. SEP and SHE are main suppliers of key components of electronic systems for
22 Boeing aircraft.

23 522. Boeing met or interacted with SEP in mid-2017 when it solicited a proposal from
24 SEP, and likely other Safran business units, to provide a hybrid-electric propulsion system for
25 the BHE-11.

1 531. Boeing's conduct violates RCW 19.86.040, which makes it "unlawful for any
2 person to monopolize, or attempt to monopolize or combine or conspire with any other person
3 or persons to monopolize any part of trade or commerce."

4 532. Boeing is attempting to monopolize the national and international markets for
5 hybrid-electric and all-electric propulsion for aircraft, the national and international markets for
6 short-haul flights under 1,500 miles, and the market for integrated door-to-door travel.

7 533. Boeing has undertaken anti-competitive conduct with the specific intent to
8 foreclose or exclude Zunum and other would-be competitors from these markets.

9 534. Boeing's position in a duopoly with Airbus in the market for larger aircraft and
10 the barriers to entry in the markets for hybrid-electric and all-electric propulsion aircraft, short-
11 haul flights under 1,500 miles, and integrated door-to-door travel, create a dangerous probability
12 that Boeing will achieve monopoly power in the market for hybrid-electric and all-electric
13 aircraft.

14 535. According to public sources, Boeing maintains a worldwide market share
15 upwards of 40% in the market for production and integration of large-body aircraft, and, in North
16 America, closer to 60% (before the recent production halts of certain 737 manufacturing).

17 536. As reflected in Mr. Sinnett's interview in *Aviation Week* in August 2017, Boeing
18 is attempting to leverage its dominant position in this market to attempt to dominate the markets
19 for hybrid-electric and all-electric propulsion aircraft, short-haul flights under 1,500 miles, and
20 integrated door-to-door travel. This would give it an opportunity to establish monopolies in these
21 markets.

22 537. Boeing's conduct has substantial anti-competitive effects, including reducing
23 viable options to reduce air emissions and noise pollution, and delaying the provision of more
24 cost-effective and convenient regional air travel.
25

1 538. Boeing has also sought to foreclose competition by patenting Zunum's trade
2 secrets and proprietary information. Patents, if valid, would create a governmentally-sanctioned
3 monopoly. False claims to patents are attempts to create such a monopoly through false
4 statements about inventorship.

5 539. Boeing's misappropriation and improper patenting of Zunum's trade secrets and
6 proprietary information imposes artificial impediments to competition in the national and
7 international markets for hybrid-electric and all-electric aircraft and in Zunum's ability to access
8 necessary capital to compete in that market.

9 540. Boeing's conduct has also starved Zunum of capital, forcing it to seek investments
10 on far less favorable terms, thereby raising its cost of capital and delaying its anticipated market
11 entry by at least two years, if not far longer. Boeing's conduct also foreclosed Zunum's access
12 to other essential supplies including capital. This delay is especially harmful in a capital-
13 intensive industry such as the aerospace industry where financial capital is a necessary upstream
14 supply. If such capital is delayed, constrained, or foreclosed, it can effectively delay or foreclose
15 competition even by an innovative first-mover.

16 541. The market for hybrid-electric or all-electric aircraft and for integrated door-to-
17 door travel is still emerging, so a combination of entrenched, dominant firms in airframe, systems
18 integration, engine and propulsion, and secondary electronic systems, can foreclose competition,
19 especially given the traditional barriers to entry, including high capital-intensity, that already
20 serve to stifle competition.

21 542. Pursuant to RCW 19.86.090, Zunum is entitled to its actual damages; an increase
22 in its damages by up to three times Zunum's actual damages; attorneys' fees; and injunctive
23 relief to prevent ongoing, anti-competitive conduct.

**XV. CAUSE OF ACTION - COUNT XI:
VIOLATION OF SECURITIES ACT OF WASHINGTON (RCW 21.20.010)
(AGAINST BOEING, HORIZONX, AND SAFRAN CORPORATE VENTURES)**

543. Zunum restates, re-alleges, and incorporates by reference each of the allegations set forth in the preceding paragraphs as if fully set forth herein.

544. The 2017 Convertible Promissory Note, 2017 Note Purchase Agreement, 2018 Convertible Promissory Note, and 2018 Note Purchase Agreement are securities as defined in RCW 21.20.005(17)(a).

545. Boeing held itself out as an investor and aerostructures partner for Zunum and received extensive information from Zunum pursuant to the PIA before agreeing to the 2017 Note Purchase Agreement and obtaining the 2017 Convertible Promissory Note.

546. Before receiving this information, Mr. Fernandes had told Dr. Kumar that Boeing's interest in electric power for aircraft was with regard to drones and other military areas, and the parallel hybrid "SUGAR" program funded by NASA for single-aisle aircraft.

547. However, shortly after obtaining the 2017 Convertible Promissory Note, Boeing's BCA unit launched an effort to replicate the ZA10 with the directly competing BHE-11. Zunum later learned in December 2017 that Boeing was developing the BHE-11 using Zunum's trade secrets, which it was also disclosing to SEP and SHE.

548. Neither Boeing nor HorizonX ever informed Zunum that BCA planned to develop a hybrid-electric aircraft, prior to the investment, and, in fact they claimed otherwise. If Zunum had known that Boeing intended to compete directly with Zunum, it would not have entered into the 2017 Note Purchase Agreement or executed the 2017 Convertible Promissory Note.

549. Boeing also proposed its support as a strategic investor and partner in the development and production of the ZA10, but in reality it had no genuine intention of leading a Series B round or supporting Zunum or the ZA10 with materials or other in-kind support.

1 550. Instead, Boeing sought access to Zunum's large body of trade secrets so that it
2 could usurp and exploit them for itself, to Zunum's costly detriment.

3 551. As a precondition of obtaining the 2018 Convertible Promissory Note, Boeing
4 induced Zunum to a fundraising process that had already led to commitments in hand for the
5 majority of the capital Zunum had targeted to raise.

6 552. In addition, Boeing held out the promise of an MSR, which it later abandoned.

7 553. In reality, Boeing had no genuine intent to pursue an MSR with Zunum.

8 554. Boeing's and HorizonX's conduct constitutes a device, scheme, or artifice to
9 defraud Zunum.

10 555. Boeing's and HorizonX's commitments were also untrue statements of material
11 fact, and they failed to inform Zunum that Boeing would be competing against it (especially in
12 the market for smaller hybrid-electric and all-electric aircraft servicing regional flights), let alone
13 by misappropriating Zunum's trade secrets, or that Boeing had no intention of pursuing the joint
14 venture or a "more strategic relationship."

15 556. Alternatively, to the extent that Boeing or HorizonX may claim that they informed
16 Zunum of an intention to compete or that they may not be able to enter into the MSR, Boeing
17 and HorizonX failed to provide material facts sufficient to make any such statement not
18 misleading.

19 557. Boeing's and HorizonX's course of conduct and their statements to Zunum reflect
20 a practice and course of business operating as a fraud or deceit upon Zunum.

21 558. As a result of Boeing's statements and omissions, Zunum has incurred damages
22 in the form of the obligation to pay the 2017 Convertible Promissory Note and 2018 Convertible
23 Promissory Note with simple interest at a rate of 6% annually.

1 559. Zunum will also face irreparable harm if HorizonX (Boeing's transferee)
2 converted its notes to equity in Zunum or was permitted to continue exercising any rights under
3 the Investor Rights Letters.

4 560. Zunum seeks to enjoin HorizonX (and Boeing, to the extent that the transfer of
5 its rights was revocable) from exercising any right to convert the notes to equity in Zunum or
6 otherwise enforcing its rights under the 2017 Convertible Promissory Note, 2017 Note Purchase
7 Agreement, 2017 IRL, 2018 Convertible Promissory Note, 2018 Note Purchase Agreement, and
8 2018 IRL.

9 561. SCV proposed to invest \$5 million in Zunum, as reflected in a letter of interest
10 issued on December 22, 2017.

11 562. In October 2018, decisionmakers from SCV also traveled to Bothell, Washington
12 to close on the investment.

13 563. However, at the meeting, SCV withdrew the offered investment on the basis that
14 the President of SEP opposed the investment, which Zunum later learned would only have been
15 done at Boeing's behest.

16 564. Zunum had completed all of the stated preconditions for the offer, including
17 allowing SCV and several Safran Group business units to conduct extensive due diligence, and
18 negotiating and executing broad development agreements with several Safran Group business
19 units, including SHE.

20 565. SCV did not inform Zunum that the investment was subject to approval of the
21 President of SEP.

22 566. SCV's conduct constitutes a device, scheme, or artifice to defraud Zunum.

23 567. SCV's commitment to invest following the completion of due diligence and entry
24 into development agreements, was an untrue statement of material fact.
25

1 568. Alternatively, SCV failed to provide material facts sufficient to make its
2 statements to Zunum not misleading.

3 569. As a result of the abrupt withdrawal of the offer by SCV, Zunum has suffered
4 extensive damages in an amount to be established at trial.

5 **XVI. CAUSE OF ACTION - COUNT XII:**
6 **VIOLATION OF WASHINGTON CONSUMER PROTECTION ACT (RCW 19.86.020)**
7 **(AGAINST BOEING AND HORIZONX)**

8 570. Zunum restates, re-alleges, and incorporates by reference each of the allegations
9 set forth in the preceding paragraphs as if fully set forth herein.

10 571. Through their breaches, tortious conduct, and statutory violations, Boeing and
11 HorizonX have engaged in unfair practices harmful to the public interest by misappropriating
12 Zunum's trade secrets and attempting to restrain trade and delay development in the market for
13 hybrid-electric and all-electric aircraft.

14 572. Boeing's and HorizonX's conduct harms the public interest by reducing
15 competition, which will have the effect of increasing the cost of air travel or avoiding or delaying
16 reductions in the cost of air travel while limiting consumer choice and convenience in air travel.

17 573. Boeing's and HorizonX's conduct also harms the public interest by delaying or
18 eliminating the deployment of technology and market systems that reduce emissions associated
19 with air travel, noise, and other externalities that the airline industry and major corporations like
20 Boeing have historically delayed addressing or failed to address.

21 574. For example, in November 2020, UBS published the results of a survey on
22 consumer preferences for alternatives to conventional jet plane travel due to environmental
23 concerns. The survey concluded that hybrid-electric planes are the most preferred alternative
24 means of transportation to conventional jet plane travel (hybrid-electric plane: 27.3%; high-
25 speed train: 24.1%; gasoline automobile: 17.4%; hybrid or electric automobile: 13.6%; standard
train: 11.8%; bus: 5.8%).

575. Boeing's and HorizonX's conduct also has harmed Zunum by causing it to have to seek capital from alternative sources at higher costs of capital and on less favorable terms, including while Zunum was in financial distress due to actions by Boeing and HorizonX; replacing Boeing, SEP, and SHE as suppliers for components of Zunum's aircraft; substantial loss of goodwill; loss of first-mover advantages in the emerging market for hybrid-electric and all-electric aircraft; among other injuries.

576. As a proximate cause of Boeing's and HorizonX's unfair and deceptive practices, Zunum is entitled to its actual damages; an increase in its damages by up to three times Zunum's actual damages; and attorneys' fees.

XVII. JURY DEMAND

Zunum demands a jury trial on all claims so triable.

XVIII. PRAYER FOR RELIEF

WHEREFORE, Zunum prays that the Court grant it the following relief:

- A. Compensatory, consequential, exemplary, punitive, and multiple damages on all claims so permitted;
- B. Prejudgment interest;
- C. Permanent injunctive relief to enjoin: (i) ongoing use of Zunum's trade secrets by Boeing, HorizonX, SCV, SEP, and SHE; and (ii) ongoing anti-competitive and exclusionary conduct by HorizonX, SCV, SEP, and SHE;
- D. A declaration that all rights of Boeing or HorizonX under the 2017 Convertible Promissory Note and the 2018 Convertible Promissory Note are extinguished, including any obligation by Zunum to repay either note or permit Boeing or HorizonX to convert any balance owed to equity in Zunum;
- E. Attorneys' fees pursuant to the PIA, RCW 19.86.090, RCW 19.108.040; and RCW 21.20.435;

1 F. Any other equitable and injunctive relief necessary to prevent and remedy the
2 anti-competitive conduct alleged herein; and

3 G. Such other and further relief as the Court deems just and proper.
4

5 DATED this 18th day of December, 2020.
6

7 s/ Eliot M. Harris

Eliot M. Harris, WSBA #36590

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CERTIFICATE OF SERVICE

I hereby certify that I caused to be served upon counsel of record at the address and in the manner described below a copy of the document to which this certificate is attached for delivery to the following:

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16 DATED this 18th day of December, 2020.

17 s/ Kristen L. Mosebar
18 Kristen L. Mosebar, Legal Assistant